DOCUMENT RESUME

ED 392 560 RC 020 215

AUTHOR Woofter, Thomas Jackson
TITLE Teaching in Rural Schools.
PUB DATE 17
NOTE 351p.; Xerox copy of original book, reproduced two pages per landscape pages. This book is cited by Mary Phillips Manke in her article "The Rural Teacher in the Early 1900's" (EJ 478 228) as a classic of rural education literature; see also RC 020 216-218, 435, 451-452, 470.
PUB TYPE Books (010) -- Historical Materials (060) -- Guides - Classroom Use - Teaching Guides (For Teacher) (052)

EDRS PRICE MF01/PC15 Plus Postage.
DESCRIPTORS Child Development; Discipline; Educational Change; Educational History; *Educational Practices; *Educational Principles; Educational Theories; Elementary Education; *Elementary School Curriculum; *Rural Areas; *Rural Education; Rural Schools; Teacher Education; Teacher Role; *Teaching Methods

ABSTRACT

Published in 1917, this book overviews rural schooling during the early 1900s and was written to address the problems of rural teaching and to serve as an introductory guide for rural teachers. Specifically, the book aimed to bring attention to the needs of rural life and the possible contributions of the rural school, to describe effective educational practices, and to overview educational theory and principles. The first section of the book provides an introduction to rural schooling and rural life and addresses types of rural schools and their functions. Other chapters in this section cover preparation of rural school teachers, organization and management of the rural school, child development, and general principles of teaching and discipline. The second section addresses specific methods for teaching elementary school subjects including reading and literature, English, spelling, penmanship, history and civics, geography, arithmetic, elementary science and agriculture, physiology, hygiene and sanitation, and arts and crafts. Emphasis is placed on the importance of grounding students in the fundamentals of reading, spelling, writing, and arithmetic along with the values of self-discipline and hard work. Each chapter includes discussion questions, additional resources for teachers, and a list of additional reading materials for students. Contains an index and a list of 20 recommended books concerning teaching in rural schools. (LP)

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TEACHING IN RURAL SCHOOLS

BY

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The Riverside Press Cambridge

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EDITOR'S INTRODUCTION

THE United States Census Bureau classifies as living under rural conditions all persons living in the open country and in towns and villages having less that 2500 inhabitants. On this basis, according to the census of 1910, 53.7 per cent of the population of the United States was classed as rural, and the figures probably have not changed materially since that date. In the last printed report of the United States Commissioner of Education it was stated that, during the preceding year, 58.4 per cent of the children enrolled in the public schools of the United States were enrolled in schools classified by the Census Bureau as rural, while of the 600,000 teachers employed, 60 per cent were employed in these rural communities. Approximately eighteen million children were enrolled in these same schools, and about 95 per cent of these were in the elementary grades.

When we turn from a consideration of the United States as a whole to a consideration of the individual States, we find that in 34 out of the 48 States more than 50 per cent of the population was living, in 1910, under conditions classed as rural, and in 17 of the 48 States the number so living exceeded 75 per cent of the whole. In 11 States the number exceeded 80 per cent of the whole. In the 17 States in which the population was more than 75 per cent rural, from 75 to 80 per cent of the teachers and children are working in rural schools. Still more, approximately 215,000 of the 600,000 teachers employed in all public schools in the United States are to-day working in one-teacher rural schools. In other words, fully one third of the teachers employed in the United States to-day are working alone, with small groups

580

of children, at the difficult problem of rural education and rural-life improvement.

When we recall that salaries for rural teachers are proverbially low, that the best rural teachers are continually being drawn away to the cities, that in many States but few rural teachers have had normal-school training, that many are teaching for the first time, that the teaching equipment is poor and the community devotion to schools often at a low ebb, that adequate professional supervision of the teacher's work is almost entirely absent, and that the problem of rural service which these teachers face is a large and a difficult one, we can see reasons why the problem of proper rural education has awakened so much thoughtful attention on the part of those interested in national educational progress.

As a result of so much attention to the problem there has arisen, especially during the past ten years, a somewhat general demand in all parts of the United States for a new and a better type of educational service for those who live in the villages and on the farms. The demand is that the school shall relate its work more closely to rural-life needs, that children shall be trained for intelligent living on the farm instead of being educated away from it, and that both the teacher and the school shall render larger community helpfulness and service. With the changing character, in many of our States, of our rural population, due to the influx of the foreign-born, the rapid increase of tenantry, the shrinkage in the size of the rural schools, and the realization that many of the best rural families are moving to the towns and cities that they may provide their children with better educational advantages, the problem of rural education has been brought acutely to the front. As a result probably as much good thinking has been given to the combined rural-life and rural-school problems during

the past decade as to any other phase of community or educational service.

The author of this volume in the series, living in a State where four fifths of the population are classified as rural, and where rural education for two races presents a difficult educational and financial problem, has for years been closely in touch with the many movements looking toward the improvement of rural life and education. He has been especially identified with the school side of the movement, and by reason of this he is particularly well equipped to prepare a book on teaching in rural schools which will be of practical service to teachers. This he has done, and for thousands of rural teachers, both beginners and those of some years of rural service, such a volume as the present one should prove to be one of large professional helpfulness. It should accordingly find an important place for itself in normal schools and teacher-training classes in high schools, as well as in state reading circles in many of those States where the population is preponderately rural.

ELLWOOD P. CUBBERLEY.

PREFACE

THIS book is an outgrowth of the experience of years spent in teaching in rural schools and of other years given to the preparation of teachers. Many excellent manuals have been written for teachers in well-graded schools of cities and towns. Some of these manuals give a few paragraphs to the problems of rural teachers. Not until quite recently have these teachers been recognized by special books devoted to their peculiar field. This manual has not only kept the rural teacher foremost in thought, but throughout its pages the teacher of the small ungraded or partially graded rural school has been kept constantly in mind. The treatment aims to accomplish several things, among which are the following: —

1. To bring to attention the needs of rural life, the broadening vision of rural life, and the possible contributions of the rural school to this life.
2. To unfold in a clear and helpful way some introductory guiding principles of education.
3. To start any rural teacher on the road of the best in modern methods in teaching and in managing.
4. To direct such a teacher to the most helpful aids in educational literature in connection with the various phases of theory and practice.

If the book succeeds in these aims, it will justify itself as an introductory study for all rural teachers who wish to become professional craftsmen.

Owing to necessary limitations of space, some topics have been treated briefly, others omitted. Doubtless errors of

omission and of commission may readily be pointed out. But with sympathy and good will this volume goes forth on its mission.

T. J. W.

UNIVERSITY OF GEORGIA, ATHENS.

CONTENTS

PART I
ORGANIZATION, INSTRUCTION, AND CONTROL

CHAPTER I. INTRODUCTION 3

Early American schools — Changing home conditions — Development of the rural-life problem — The enrichment of rural life — The rural school amid the change — The reorganization and redirection of the rural school.

Questions for discussion — Some good books for teachers.

CHAPTER II. THE RURAL SCHOOL 9

I. ITS FUNCTION AND SCOPE IN GENERAL.

The school a specialized institution — Education for complete living — Rare opportunity of rural schools — Broadening view of the rural school.

II. RURAL LIFE NEEDS.

The bodily life — The intellectual life — The æsthetic life — The industrial life — The social life — The moral and religious life — Conclusion.

III. TYPES OF RURAL SCHOOLS.

The consolidated school — Progress of consolidation — The one-teacher school — Standard schools — The Missouri score card.

Questions for discussion — Books for teachers.

CHAPTER III. THE TEACHER 25

THE RURAL-SCHOOL TEACHER.

I. NATURAL EQUIPMENT.

Teaching Personality — Important teacher-qualities: Good health, well preserved — Pleasing personality — Imagination — Appreciation of rural life — Character — Other qualities.

II. PREPARATION.

Scholastic preparation — Professional preparation — Efficiency maintained — The teacher in service — Teachers' salaries.

Questions for discussion — Books for teachers.

CHAPTER IV. Organization and Management . . 36

I. The School Plant.
The school grounds — The schoolhouse — Heating and ventilation — The water supply — Blackboards — School desks — Other equipment.

II. Organizing the Plant.
Before the opening day — Assistance of pupils — Preliminary pupil organization — Classifying and seating.

III. Organizing the Work of the School.
The course of study — Possible reorganizations of the school — Alternation of classes — A suggestive program for a rural school of eight grades and one teacher — Using older pupils as teacher-assistants.

IV. Organizing Recreation.
The value of play — Supervision of play — Grouping of pupils in play periods — Books and play apparatus — Beginnings in play organization.

V. Organizing the Community.
School events — Special-day programs — Other suggestions for community effort — Some rural-community characteristics.
Questions for discussion — Books for teachers.

CHAPTER V. General Principles of Teaching . . 65

I. The Child.

I. Periods of Growth and Development.
Infancy and early childhood — Childhood — Characteristics of this early period — Youth, or adolescence — Adolescent characteristics — The problem of adaptation — Chronological and physiological age — Individual differences — Average weight and height.

II. The Child's Original Capital.
Instincts and general innate tendencies — The development of instincts — Individual variations.

III. Interests.
Forcing and arrested development — Interests awakened by nature — Interests centering in man — Dr. Dewey's classification — How to develop interest — Interest and drill.

IV. Apperception.
Definition and illustrations — Some applications for teachers.
Questions for discussion — Books for teachers.

CHAPTER VI. General Principles of Teaching . . 86

II. The Recitation.
Lessons and recitations — How to handle recitations in rural schools — Varieties of recitation work — The inductive-deductive aim — Influence of Pestalozzi and Herbart — The steps of a recitation — Applications of the process to school work — Limitations of the process — The testing aim — The drilling aim — The reviewing aim — The appreciation aim — The study aim — Desk work — Suggestions for primary-grade desk work — Questioning — Orderly thinking and talking — Plans of lessons.
Questions for discussion — Books for teachers.

CHAPTER VII. Discipline 105

I. General Purpose

II. More Specific Purposes.

III. General Methods in Discipline.
The teacher as monarch — The dominating personality — Discipline through interest — Discipline through self-interest — Discipline through awakening higher ambitions.

IV. Disciplinary Measures.

1. *Preventive measures.*
Good organization and instruction — Repression *vs.* expression.

2. *Constructive measures.*
Forming good habits — Creating a wholesome school spirit or atmosphere — Reconstructing a school community — Use of incentives — Moral training — Methods in moral instruction — Moral forces of importance.

3. *Corrective measures.*
Some punishment at times necessary — Guiding principles in punishment — Some school faults, and how to handle them — A school-conduct platform — Corporal punishment — Improper and proper punishments.
Questions for discussion — Books for teachers.

PART II

TEACHING THE ELEMENTARY-SCHOOL SUBJECTS

CHAPTER VIII. INTRODUCTORY 135

Child needs and cycles — Fundamental studies of the first six years — The upper grades — What the second part will include.

CHAPTER IX. READING AND LITERATURE 137

Importance of reading — The alphabetic method — The word method — The sentence method — The phonic method — Supplemental reading needed.

First Lessons.

Objective work — Child interests — Use script — Drill cards — Phonics — Ear drills — Order of teaching the letters and sounds — Diacritical marks — Other first-grade suggestions.

Second Grade.

Lengthening thought-getting and giving — Stories: dramatic work — Building words: voice training.

Third Grade.

Emphasis on silent reading.

Upper Grades.

Oral Reading.

Importance of reading aloud — Training in thought-getting — Reading to the children — Selections for memorizing.

The School Library.

A good rural-school library — Keeping up the library. Questions for discussion — Books for teachers.

CHAPTER X. THE ENGLISH LANGUAGE 163

I. ELEMENTARY LANGUAGE LESSONS.

Qualities to be cultivated — Importance of language for school work — First steps — Formal lessons — Written forms.

1. *Written work in primary grades.*

First year — Second year — Third year.

2. *Written work in upper grades; composition work.*

Sequence — Types of compositions — Making compositions real — Correcting compositions — Books for teachers.

II. Story-Telling.
Some values — Kinds of stories — Telling the stories — Books for teachers.

III. Picture Lessons.
School use of pictures — Pictures for language lessons — Kinds of picture lessons — Suggestions of methods — Books for teachers.

IV. Grammar.
Some values — Where to be taught — Inductive-deductive method — Diagramming.
Questions for discussion — Books for teachers.

CHAPTER XI. Spelling 187

Two important tool subjects — Some faults in teaching spelling — Needed reforms — Selection of words — Small number of words needed — The "one hundred spelling demons" — Local vocabularies and spelling needs — Methods of study — Better methods in teaching spelling — Dictionary work — Word study and spelling rules — Written and oral spelling — Simplified spelling.
Questions for discussion — Books for teachers.

CHAPTER XII. Penmanship 199

Qualities of good penmanship — Systems of penmanship — Some teaching faults — Points on which there is general agreement.

Some method suggestions.
Pen and pencil — Position, penholding, and movement — Form and movement — Other suggestions — Stimulus of a writing scale — Standards which ought to be attained.
Questions for discussion — Books for teachers.

CHAPTER XIII. History and Civics 211

The point of view — Fact history and human history — Summary as to purpose.

I. Primary History.
Early beginnings — Kinds of historical stories — Stories of primitive life — Stories from real history — Introducing the real historical personage — Selection of stories — Value of biography — Story treatment.

II ADVANCED HISTORY.
The book phase — The text and its use — Advantages of a topical method — The organization of textbooks — Dates in history — Reviews — Aids — Important results.

III. CIVICS.
An outgrowth from other studies — Practical civics.
Questions for discussion — Supplemental books for pupils and teachers — Books for teachers.

CHAPTER XIV. GEOGRAPHY 231

Old and new types — A study of the earth as the home of man — Some values.

I. PRIMARY GEOGRAPHY.
The story approach — The nature-study approach — Suggestive topics — Primary globe lessons — References.

II. ADVANCED GEOGRAPHY.
Need for type studies — What a type study is — Type cities — North America a type continent — Man's contact with nature the center of geography — Map-making — Drawing the schoolroom and the locality — Filling in outline maps — Imaginary journeys — Use of pictures — Other helps.
Questions for discussion — Books for teachers.

CHAPTER XV. ARITHMETIC 250

Another necessary tool subject — Some reform tendencies — How little arithmetic we need — The fundamentals in arithmetical instruction.

I. SYSTEMS OF PRIMARY METHOD.
The old system — The Grube system — The Rational System — Characteristics of modern method — Demands on rural-school arithmetic.

II. BRIEF OUTLINE OF THE ARITHMETIC COURSE.
Plan of the course — Induction — Interpretation — Steps in solution — Miscellaneous problems.
Questions for discussion — Books for teachers.

CHAPTER XVI. ELEMENTARY SCIENCE AND AGRICULTURE 263

Recognition of values — Moral and religious value of science — Man's racial evolution — A parallel evolution in the study of nature.

18

I. Elementary Nature Study.
Methods — Guiding principles in selection — Methods of study — Correlating the work with other subjects — Suggestive material — Outline of work.

II. Agriculture.
The teaching of agriculture — School gardens — Boys' and girls' clubs — Types of clubs organized — The general plan for these clubs — Organizing a county — Independent organizations — Advantages of the project method — Exhibits and awards.

III. Advanced Nature and Agricultural Studies.
Outlines for general bird study — Outlines for insect study — Other important studies — Topics for study, by months — Supplementary topics — Good farm lessons.
General helps for teachers — Questions for discussion — Books for teachers.

CHAPTER XVII. Physiology, Hygiene, Sanitation . 296

The rural school and health — Physical conditions — What a rural school should teach — Child hygiene important — The health survey — The teacher's records — Pupil sanitary surveys — Mental hygiene.
Questions for discussion — Books for teachers.

CHAPTER XVIII. Arts and Crafts 306

I. Home Economics.
Club and home work.
1. Cookery.
Some general topics for study and club discussion — Special recipes and menus — Dishwashing — School lunches — Supplies — Conduct of the work.
2. Needlecraft.
Sewing and care of clothes — Neatness and taste.

II. The Manual Arts.
Early grade work — Woodwork — Care of tools — Working drawings — Projects — How to handle the work if there is no special room for it.
Questions for discussion — Books for teachers.

APPENDIX. A List of Twenty Good Books for Rural-School Teachers 317

INDEX 323

LIST OF FIGURES

1. A type of the consolidated school 17
2. A typical rural school of the better class 20
3. A typical present-day interior 37
4. A rearranged interior 38
5. A model interior for a one-teacher rural schoolhouse . 40
6. A well-arranged rural schoolhouse 41
7. The model rural school at Mayville, North Dakota . . 42
8. Desk too high, and the result 43
9. Showing growth in height and weight 66
10. Showing comparative proportion of time to be devoted to the mechanics of reading and to mental and emotional training 139
11. Showing comparison of amount of oral and silent reading advisable in the various grades 156
12. Ayres Measuring-Scale for Ability in Spelling . . . 190
13. Showing proper position of body and paper in writing, with reference to the desk 203
14. One section from the Ayres Handwriting Scale . . . 208
15. One section from the Thorndike Scale 209
16. Health defects in city and country children compared . 299
17. Showing some health conditions brought out by a health survey of a city school system 303

TEACHING IN RURAL SCHOOLS

PART I

ORGANIZATION, INSTRUCTION, AND CONTROL

TEACHING IN RURAL SCHOOLS

CHAPTER I

INTRODUCTION

Early American schools. In very early days with any society of people, there were no schools and no teachers as such. Children learned in the family and from people in the group. As knowledge accumulated, teachers became necessary; and as groups grew larger and more complex, schools were started to help the home and the community with the children. Thus, from the first, teachers and schools were designed as auxiliaries of the home and community. The teacher took the place of the parent for the time, and the school was a small community to prepare for life in the larger community. A modern school should keep in mind this same mission.

In our earlier colonial days, people were occupied in the struggle with the wilderness and with a savage people. Very little scholarship was needed for this purpose, hence schools had little to teach. The colonies early took steps to provide the education thought best — reading, writing, spelling, a very little arithmetic, and the rudiments of religion, mainly the catechism. The religious aim was most prominent.

Later on, schools called "Latin Grammar Schools" came to predominate, such being schools after ideas of those in Europe. The prominent aim with these at first was education in the Latin and Greek classics, but later the aim shifted to the discipline of the mind. This led to the introduction of

algebra, and to a greater stress on grammar, spelling, and arithmetic, since these furnished the best matter for disciplinary drill. In the nineteenth century the public schools modified this further by gradual additions of some history, geography, physiology, civics, and primary language, though these were taught mainly as dry book-studies and with the same methods of drill.

Changing home conditions. While all this was taking place in the schools, conditions were changing in the home and community. At first the home produced nearly all the necessaries of life. Milk, butter, eggs, meat, preserves, jellies, and similar eatables were home products. Grains were raised on the farm and converted into meal, flour, and hominy at home, or at a neighborhood watermill. Wool, cotton, linen, and hides were home products, converted into cloth and leather at home, and there made into clothing for members of the family, harness for the horses, carpets for the floors, and furnishing for beds, windows, etc. Farm, ranch, or plantation had its carpenter and blacksmith shops. Boys and girls entered into all these activities of home productivity and equipment, and thus, without calling it such, they were acquiring a valuable education outside the schools.

This old order has largely passed. With the coming of steam and factories a new order has developed, and most of these industries have gone out from the home. What formerly were home products must now be purchased at stores and markets. Children are thus deprived of valuable industrial training in the home, whilst women and children have not the same opportunities as of old to contribute as much to the support of the family.

Development of the rural-life problem. In this new order towns and cities grew up rapidly. People drifted rapidly from country to town and city. Communities thinned out, many farms were abandoned, and other changes took place

to make country life more barren, uninteresting, and apparently undesirable. The country school and the country church, formerly two great centers of community life, were neglected, lost sight of in the drift of things, and nearly starved to death.

Just recently have we awakened to the real state of affairs. To-day we are taking stock and studying readjustments. Very few rural schools have as yet been able to change so as to adapt to the new order of things. This has not been the fault of the teachers. The city has been absorbing the children, teachers, and substance of the country. We now realize that, in the long run, this is very bad for both city and country; for, in this land, cities cannot thrive without a prosperous country around, to say nothing of the effect on human character to have a nation run too far cityward.

The enrichment of rural life. Many recent developments tend to change country life into a happier, more fruitful, and a more desirable existence. Better farm machinery, telephones, rural mail delivery, parcels post, automobiles, and the extension of trolley systems may be mentioned as factors contributing to the enrichment of country life. Farming is becoming more scientific and productive, and the farmer is getting better prices and wider markets for his products, all going to make farming often a better business than merchandising. It can be made one of the most desirable businesses of the world.

The farm, too, can be made one of the most desirable of places in which to live and to bring up a family of children. The present barrenness and poverty of cultural influence which characterizes so many of our rural homes is not necessary. A little more knowledge of life conditions, a little more taste, and a little more scientific knowledge relating to farming and home-making could greatly change existing conditions. These the rural school should supply. To improve

farming, to help make better homes and better and happier people, to increase the pleasures and the comforts of the home, and to give a larger outlook to both the children and the parents, is much more the mission of the country school and the country teacher than to teach the common-school branches or to drill in the facts of the textbook or the course of study.

The rural school amid the change. But, while this new and more valuable era is dawning for country life, how about the country school? City schools have made great progress, but the vast majority of rural schools have not been able to readjust to the changed conditions. In many instances the rural school has lost ground, the attendance has dwindled until enthusiasm is gone, many classes have become one-pupil classes, games have lost their charm, the best teachers have been taken by town and city, and the community interest in the school has waned. Quite recently, however, a new interest in the rural school has sprung forth. It is probably talked of and thought about more to-day than any other educational factor. Teachers, statesmen, philanthropists, and all sorts of writers are turning their attention to the rural school as the greatest factor in the rebuilding of country life. Yet all the laws, all the philanthropies, all the appropriations of money, all the enlargement of school houses and plants, can accomplish little without teachers prepared for the new order. The teacher is the heart of the problem. Teachers must equip for the new order, and must often be the missionaries to convert rural communities to a belief in the new education.

The reorganization and redirection of the rural school. In all problems of social reform, the fundamental factor relied upon for the solution is education, properly directed. Social reformers have cried out against the slums, sweat shops, poverty, and degradation of our large cities. The isolation

of the country, with its accompanying intellectual, æsthetic, social, and religious poverty, is a greater challenge to the reformer. How can education be reformed and properly directed to meet the conditions? There is no higher call for service than here.

The problem of reorganizing and redirecting rural education is not a simple or an easy one. Those who would understand the problem must study it in its relations to the entire rural-life problem. The rural-life problem is largely a complex of social, industrial, religious, and educational needs. These needs have a historical development and a sociological setting which the rural teacher ought to understand. To meet these new social, industrial, religious, and educational needs the rural school must redirect itself. In a new way it must minister to the needs of the people who live on the farm. While the teacher who would understand this new problem must read more than this one book, it will nevertheless be the aim of the author, in the pages which follow, to set forth some of the ways by which the rural teacher can organize and teach a better school, and become a more useful community servant.

QUESTIONS FOR DISCUSSION

1. What is meant by isolation of country life?
2. What social gatherings of some years ago served to modify this isolation?
3. Why are these no longer common?
4. Wherein is the country school often less valuable socially than it was formerly?
5. What improvements now help to modify rural isolation?
6. Wherein has city influence crippled country schools?
7. What are some of the needs of rural schools to-day?
8. Wherein should there be improvement in teachers for rural schools?

SOME GOOD BOOKS FOR THE TEACHER

Carney, Mabel. *Rural Life and the Rural School.* (Row, Peterson & Co.)
A very helpful book for rural teachers.

Cubberley, E. P. *Rural Life and Education.* (Houghton Mifflin Company.)

An interesting and comprehensive presentation of the historical development and present status of the rural-life problem, and what are the rural-school needs of to-day. Good for individual reading or group study.

Foght, H. *The American Rural School.* (The Macmillan Company.)

Hart, J. K. *Educational Resources of Rural and Village Communities.* (The Macmillan Company.)

Kern, O. J. *Among Rural Schools.* (Ginn & Co.)

CHAPTER II

THE RURAL SCHOOL

I. Its Function and Scope in General

The school a specialized institution. A true democratic community demands that all children shall be initiated into the knowledge, culture, and experience which its people have acquired, and into activities which will make these children thrifty and good members of the community. The school is the institution especially developed by society to aid the family and the community in giving this education. It has had to take over from time to time certain things formerly attended to in the family or the community, but which, owing to changed conditions, must now be left to the school. In many other ways the field of the school is gradually enlarging; but as its work increases in complexity, its origin should be kept in mind. It is an enlarged family and a miniature community with one central interest, the child, and its aim should be continually to supplement the family training and to introduce the child to the larger life of the community.

Education for complete living. A modern belief is that through community activities we find the first approach for the child to the knowledge, culture, and experience of value. Books are necessary, but our school work has become too bookish. We must incorporate into our school practices some of the principles of modern definitions of education, an often quoted one of which is this from Herbert Spencer, "Education is preparation for complete living." He analyzed the activities of complete living as follows: —

1. Activities centering about direct self-preservation. These have to do with good health, or the bodily life in general.

2. Activities connected with indirect self-preservation, getting food, clothing, shelter, gaining a livelihood. We may style this phase the industrial life.

3. Activities relating to the care and culture of children: the educational life.

4. Activities which pertain to the State and to the community in living the life of a valuable, worthy citizen: the political and social life.

5. Activities associated with leisure, enjoyment, happiness in the recreational and æsthetic life.

These will be more fully treated later on. In this connection it may be emphasized that the best preparation for life comes in the main through life's activities. We should not forget that thought arose out of activity and to guide activity, hence activities must be utilized as factors in developing the thinking powers of children. Our school work has placed the greatest stress upon the intellectual life, the acquisition of knowledge. Gradually the other phases of life are winning recognition, and just now we hear much discussion of vocational education. It remains to make place for this larger program in rural education and none of these phases of life should be neglected.

Rare opportunity of rural schools. The "Back to the Country Movement," and the broader "Rural-Life Movement" of recent years, have alike centered attention on rural schools, and a new order of schools is coming into existence. In the educational reforms of centuries there has been nothing more inspiring than the new educational life now coming into many rural communities. This new life has found a quickening place in every State of the United States. It is at last dawning in public consciousness that the rural

school offers probably the best opportunity in the world for an ideal school. Here community activities can be more readily utilized by the school than can be the case in cities. Here vocational education is simpler, and least in danger of creating caste, and country life is most natural and most independent.

Man lived through the pastoral and agricultural stages before cities and machinery appeared on the earth, and in following the historical development of the race the child needs to participate in rural activities. These will not narrow his development as will a restriction to a trade education in the city. It would be a great reform in city education if transportation would carry city children far out in the suburbs to school plants with rural surroundings. And thus the rural school, the stone rejected by the builders, should become the chief cŏrner-stone of the temple of education.

Broadening view of the rural school. While social and industrial conditions have been rapidly changing, while improved machinery, communications, and scientific farming have been recreating country life, and while the city schools have been making many progressive improvements, the rural schools have until recently made but little progress. It is now being realized that the bare rudiments taught in the "little red schoolhouse" or the "old field school" are not sufficient, and that the rural school, as well as any other school, should have the ideal of complete living. A reconstructed school is demanded which will be adapted to rural life, and which shall be as complete and extensive of its kind as the city school is of its kind. It is wrong to have to send country children to the city for the best schools, either elementary or high schools.

II. Rural Life Needs

Even a hasty examination of the conditions surrounding life in the country reveals clearly certain fundamental needs if rural life is to be made satisfying to the type of young people we would like to retain on the farm. The following stand out clearly as of fundamental importance and are ones the teacher in a rural school should keep clearly in mind: —

1. **The bodily life.** With all the advantages of the country it is noticeable that city youth often have the better physique and ease of motion. Neither are country people as free from sickness as we have expected of them. Typhoid and other fevers are common, and even tuberculosis claims nearly as high a percentage in country as in city. Indigestion and kindred evils are widely prevalent. Physical education is needed here as elsewhere. Good health is the first prerequisite to a successful and a happy life.

What are the new demands? —

(1) Regular instruction should be given in hygiene, sanitation, and physiology to all children, and this of a very practical type.

(2) Especially should the girls be taught the scientific preparation of foods, what constitutes well-balanced meals, proper care of children and invalids, and home science in general.

(3) The plays, games, and other physical exercises should be as carefully looked after as are the indoor studies.

(4) There should be equipment for play and physical exercise, such as exercise bars, slides, hand swings, volley ball, tether ball, tennis, croquet, and many other playground necessities. These are necessities as much as are school desks.

(5) A health inspector is needed for country schools as well as for city schools. It will be more difficult to secure

one for country schools, and the teacher must assist greatly. The teacher can make some beginnings. There should be individual inspection of children, and records kept from year to year of each. Eyes, ears, teeth, nose, throat, chest expansion, position of shoulders, weight, and height should receive attention. The teacher should try to obtain a physical estimate of the school, should aid in giving instruction looking to correction of defects, and thus assist every child to approximate the normal.

2. **The intellectual life.** It has been well recognized that the school is to assist the child to acquire knowledge and to develop his intellectual capacities. The rural child needs the knowledge which will serve him in his rural environment, and he needs to know broadly the world as his home. Books first, then magazines and newspapers, are intellectual tools he must learn to use and use well. Illiteracy is highest in the country, a condition to be corrected. Book study must go on in the conventional common-school branches, and the library must come in as another factor as necessary as textbooks. Active and abiding intellectual interests must be developed as the best safeguards against the narrowing tendencies of rural isolation. Apart from the maddening excitement of modern city life, genius can find itself best in the reflective quiet of the country if opportunity is there. The public schools are accused of over-mechanization, too much routine, and other things deadening to originality. The freedom possible in rural education offers opportunities of highest value for individuality.

3. **The æsthetic life.** Rural surroundings are full of beauty, yet few country people appreciate this as they should. Here the opportunity is great for development of appreciation of the birds, their colors, songs, ways, and values; of color in flowers, fields, and woods; of nature's various moods and adaptations. The study of pictures and

literary classics opens additional avenues to the higher enjoyments. Beauty in household architecture and furnishings is a fruitful topic for study in connection with drawing and handicrafts. The beautifying of school grounds and houses with walks, flower beds, trees, pictures, etc., should be planned, and both children and older members of the community drawn into it. Interests and taste may be thus developed and transferred to the homes.

Who has not noticed the plain, box-like appearance of so many country houses, without any attempt at symmetry or beauty, the yards barren, and probably the situation chosen at random when a much better one was near at hand — all bespeaking the lack of æsthetic values of life. Visiting a very large sanitarium for the insane in one of our States, the author was told that most of the women inmates were from the rural districts. The superintendent, quite an authority in his field, said that these unfortunates, isolated in farm homes, having sickness, troubles, and hard times, as most people do, yet lacking in any interests to take them away from themselves, brooded over their conditions until after a while their minds lost balance. Had they earlier in life developed an appreciation of values in nature, art, and literature, these would have afforded refuge in the time of storm and stress. Surely the æsthetic should not be omitted from our rural educational values, and experience goes to show that this work needs to begin early in the school course.

4. **The industrial life.** Manual training has found a place in modern school programs, its aim being the development of brain centers connected with hand activities. In addition it is being urged more and more that education should prepare each child for some vocation, and thus fit him for the struggle of earning a livelihood. Cities are organizing trade schools, industrial high schools, continuation schools, and other schools to make skilled workers in the vocations of

these cities respectively. With this changing order in the cities and towns, it is a greater calamity than ever to send so many children from the country to the city schools for better education. Opportunity should be at their doors for education in the great vocations of the country.

The industries of the farm can be more readily utilized in education than can most of those in cities. Agriculture is being put upon a scientific basis, and much is being done to interest both boys and girls in many of its activities. It has already been pointed out that these activities are in themselves educative, that they are more fundamentally so than city activities, and that the business of farming is becoming one of the best. The rural children are entitled to receive the very best education to equip them to become skilled workers in their field of the world's work.

5. The social life. Probably this should be divided into two parts and each treated separately — social life and political life. The first embraces life in the family, the neighborhood, and the community in the ordinary significance of the term "social." The second treats the child as the prospective citizen of a State or community, from the standpoint of law and order, in regulating the affairs of the community or State. Individuals do not exist outside of society, and every child should be taught his part as a valuable member of his community. Then, too, there are social instincts which prompt people to seek in many ways the company of others. Plays and games recognize this. People like to come together in picnics, in lectures and entertainments, in mass meetings and political rallies, and in many other ways in which the school may aid. The school may again become the social center of the community, and certainly it is in duty bound to do all in its power to train for good citizenship and to cultivate social traits which make for agreeable and lovable community members. The art of

meeting people, of being gracious and companionable, in short the art of living together is the highest of arts. Social life in the country is often cited as a disadvantage, but it is capable of enrichment and improvement along many lines, and herein is a most important field for school endeavor.

6. The moral and religious life. This topic probably should be treated as two separate ones. It is true that religion had its origin in ideas of the unknown and the supreme control of man's life and destiny, whilst morality had its origin in man's dealings with his fellow man. Still, morality and religion have come closer together in our ideals of human perfection, and each one supplements the other. We no longer sanction any immoral ceremonies or practices as religious, and religion offers the most effective reinforcement of morality. No human life is complete without both. The moral and the religious nature distinguishes man as higher than other animals, and on this platform only has human society been possible. We therefore find herein the things of highest importance both for the individual and society. Why should these things of highest value receive the least attention in our educational schemes?

It has often been assumed that in the country children are free from temptations and are naturally better than urban children. Concrete studies have disclosed that the Devil has been just as busy in the country, that evil-mindedness has somehow crept in, and that other factors ruinous to character have been active in spite of the apparent isolation and immunity of country children. In a systematic way, moral education should receive attention throughout the school course, the materials and the presentation being adapted to the stage of development of the child; and all education may be fundamentally religious.

Conclusion. The rural child must come into his inheritance. No equitable opportunity should be denied him, and

the best is none too good for him. The broader view of education is now the accepted ideal, and therefore we must find ways to encompass it.

III. Types of Rural Schools

The consolidated school. To carry on the manifold activities of the rural school of the new order may seem impossible in one-teacher schools. The best solution proposed is to consolidate several schools into one, and where distances are

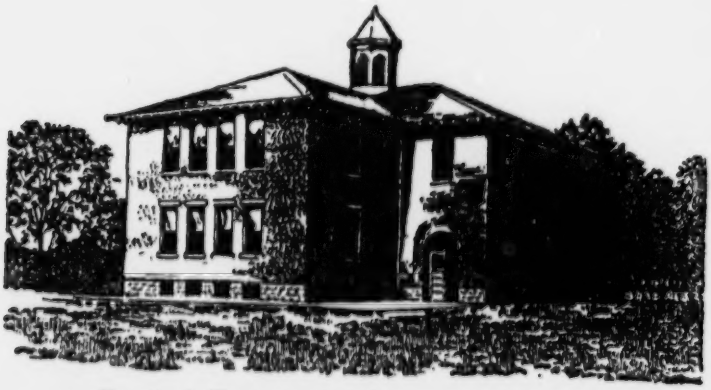

Fig. 1. A Type of the Consolidated School

Central Consolidated School, Trumbull County, Ohio. This is a brick, steam-heated, slate-roofed building, which cost about $10,000. It has eight rooms and basement, and four acres of ground. It is located five miles from a railroad, and is the most conspicuous landmark of the region. High school, elementary school, and kindergarten are provided, and an annual lecture course and many community entertainments are held here. It is a community center for the township. (From Cubberley's *Rural Life and Education.*)

thus greatly lengthened, transportation wagons may be furnished to convey children to and from school. Some advantages of the consolidated schools are the following: —

1. A graded school made possible, which may extend through the high school.
2. A division of labor among several teachers, hence more time given to respective subjects and better results.

3. Specialization in teaching, giving better opportunity for the newer subjects and rural activities, and more highly skilled teaching in general.
4. Teachers remain longer in position, giving needed continuity of work.
5. Better school houses, grounds, and equipment.
6. More regular attendance, and children remain in school a greater number of years.
7. Greater enthusiasm in studies, plays, games, and all school activities.
8. Children better protected going to and from school.
9. Good supervision is made possible, including health supervision.
10. The school can be made a greater community center for educational gatherings, and other gatherings of people young and old.
11. Often there is much waste in a one-teacher school of few pupils, perhaps many classes with one pupil each, yet the teacher must be paid, and the school plant maintained about the same as for thirty pupils. Consolidation saves this waste.

Some people fight consolidation for fear that it will cost them more. In some cases, consolidation has saved waste until the cost was less for all the schools consolidated. In some cases it has cost slightly more. But in all cases, think how much more the children and the community are getting for the money. Farmers want the latest improved machinery because it is better. Why not better schools for the children as well?

In many instances only two schools have united, and in some States the new school is called a *union school* if made up of only two one-teacher schools, and a *consolidated school* if made up of three or more smaller schools. In one State such combined schools are called *centralized schools.*

Progress of consolidation. In some cases transportation wagons are provided for the children, and in other cases each family manages for its own children. In some cases, the one-teacher schools are kept for the first five or six

40 40

grades, and the older, more advanced children are sent to some central school for higher grades. Though as far back as about 1870 Massachusetts made provisions for transportation of pupils, and County Superintendent of Schools A. L. Wade, of Monongalia County, West Virginia, inaugurated a graduating system for country schools, bringing together several schools for commencement exercises and thus getting neighborhoods together for great educational rallies, yet the general movement over the country for consolidated schools is quite recent; hence its many varieties worked out under varying conditions. Mississippi reports one county, which in 1912–13 replaced thirty-one schools with six consolidated schools. West Virginia reports ten schools of a mining section consolidated into one, with a new building strictly fireproof, with glass roof, modern sanitary apparatus, and general equipment equal to that of the best city schools.

The topography of the country, the condition of the roads, the density of the population, and, above all, the community spirit are factors determining the type of consolidation which should be undertaken. Sometimes only two schools can be united, but generally three or more are favorably connected for consolidation.

The movement has spread until practically every State in the Union has consolidated some schools, and in some States wonderful progress in consolidation has been made. Yet our country people are conservative, and the old order will hold on with a strong grip. Teachers must be missionaries of the new gospel of the better rural school.[1]

The one-teacher school. Owing to sparsely settled regions, impossible roads, and slow-moving reforms, the one-

[1] *Rural Life and Education*, by E. P. Cubberley (Houghton Mifflin Company), gives an excellent chapter on the needs for consolidation and the possibilities of the consolidated rural school.

teacher schools will exist in large numbers for many years to come. These, too, must be redirected, so as to enable them to accomplish much of the new order. Buildings must be added to and equipment furnished. The teacher must often begin in the one room, and arouse interest through the chil-

FIG. 2. A TYPICAL RURAL SCHOOL OF THE BETTER CLASS

This is a good example of from one third to one half of the 212,000 rural schools in the United States. (From Cubberley's *Rural Life and Education*.)

dren's new work until better things are provided. Teachers must here be prepared to realize as fully as possible the broader view of the education for rural life. Some one-teacher schools have already done marvelous things in this direction. Nearly all depends on the teacher. We must not wait for consolidation to solve the problems, but begin with what may be accomplished at once, looking to the larger accomplishments as sure to come in time.

Standard schools. To stimulate schools and communities to broaden and adapt their school work, and to improve

their school buildings and equipment, state and county superintendents in many States have formulated standards for rural schools, and when any school fulfills the standard a certificate is given rating the school as "A Standard School." This has stimulated many communities and helped the teachers to better things.

In the school laws of the State of Ohio we find these provisions: —

One-Teacher Schools

Each one-room school in any school district which shall fulfill the requirements of this section shall be considered a rural elementary school of the first grade. Such requirements are as follows: —

(*a*) Clean buildings and yard.
(*b*) Building in good repair.
(*c*) Separate screened privies for each sex, or inside toilets.
(*d*) Maps of Ohio and United States.
(*e*) Library of not less than fifty volumes.
(*f*) One hundred square feet of slate or composition blackboard; the lower margin, of not less than twelve lineal feet of which board, shall be within two feet of the floor.
(*g*) A system of heating with ventilation — minimum, a jacketed stove.
(*h*) Buildings hereafter constructed to have in connection with them not less than one acre of land for organized play.
(*i*) Teacher with at least a three-year certificate.
(*j*) Agricultural apparatus to a value of at least fifteen dollars.

Consolidated Schools

Each consolidated school in any village or rural school district which shall fulfill the requirements of this section shall be considered a consolidated elementary school of the first grade. Such requirements are as follows: —

(*a*) Clean building and yard.
(*b*) Building in good repair.
(*c*) Separate privies screened for each sex, or inside toilets.
(*d*) A case of not less than six maps, including a map of Ohio.
(*e*) Library of not less than one hundred and fifty volumes.

(*f*) One hundred feet of slate or composition blackboard; the lower margin, of not less than twelve lineal feet of which board, shall be within two feet of the floor.
(*g*) A system of heating with ventilation — minimum, a jacketed stove.
(*h*) Buildings hereafter constructed to have at least three acres of land in connection with each school, one for agriculture and school garden purposes.
(*i*) Three rooms and three teachers or more on full time, one teacher to have at least a three-year certificate.
(*j*) A course in domestic science.
(*k*) Two teachers to be employed for ten months each, one teaching agriculture during the school term and to supervise agriculture during part of the vacation. The other to teach domestic science during the school year and to supervise domestic science instruction during part of the vacation.
(*l*) Agricultural and domestic science apparatus to the value of at least one hundred dollars.

Added to these should be the items of pictures, trees, shrubbery, flowers, boys' and girls' clubs, and community programs.

Superintendents arrange lists for their States, giving the items to be stressed under the important factors, buildings, grounds, equipment, teachers and teaching, discipline, boys' and girls' clubs, attendance, community gatherings, etc., these items varying as conditions of sections vary. Each item may be assigned a value of points, and the school which can score the required number of points will thus be adjudged a "Standard School." In some cases, additional items may be exhibited and a higher score made to give the school the honor of the title, "Superior School."

The Missouri score card. In Missouri, as well as in a number of other States, a score card for scoring up rural schools has been devised which has rendered good service. Before being considered for approval the school must have complied with the following requirements: —

(1) The term must be at least eight months in length.
(2) The teacher must hold a certificate higher than a third grade county.
(3) The salary paid the teacher must be at least forty dollars per month.
(4) The board must have complied with the library law.
(5) The state course of study must be followed.
(6) The organization and classification of the school must be definite and systematic.
(7) The instruction and discipline must be satisfactory.
(8) The school buildings, grounds, and outbuildings must be adequate, cleanly, and sanitary.
(9) The room must be heated by other means than radiation.
(10) The teacher must be a regular attendant at county and township meetings.
(11) A satisfactory program of recitation and study periods must be posted conspicuously.
(12) A total credit of 80 points out of a possible 100 must be earned.

After these conditions have been met the school will be visited and its condition, equipment, organization, and teacher scored, using the score card on page 24.

The exact information as to state demands contained in these standards, and the emulation inspired, have led to the betterment of many rural schools.

QUESTIONS FOR DISCUSSION

1. Wherein has the country school unique advantages?
2. Show wherein the rural school of a few years ago fell short of every one of the standards given under "Broadening View of the Rural School."
3. What can the teacher do towards the betterment of rural schools?
4. Under what conditions is a one-teacher school justifiable?
5. Should a one-teacher school be a one-room school?
6. Should a one-teacher school attempt high school subjects in addition to all the elementary grades? Should this be regulated by law?
7. Explain the different types of consolidated schools.
8. What are the advantages claimed for consolidation?
9. On what grounds will some people oppose it?
10. Work out the important items under each requirement given above in the Ohio law, and assign to each a relative number so that all the numbers add up 100.

11. Score up your school using the Missouri score card, and determine its rating.

BOOKS FOR TEACHERS

Carney, Mabel. *Rural Life and the Rural School.* (Row, Peterson & Co.)
Cubberley, E. P. *Rural Life and Education.* (Houghton Mifflin Company.)
Dewey, John. *Schools of To-morrow.* (E. P. Dutton & Co.)

Scale of points	*Possible score*	*Points allowed*
Condition of School Building — 20 points		
Outside, well painted, well preserved	4	
Inside, walls plastered, painted or papered, clean	3	
Light, windows arranged properly, and provided with shades	4	
Ventilation, provisions for lowering windows at top	4	
Floor, tight, smooth, and clean	2	
Heating, by good stove properly jacketed and located, or by furnace	3	
Apparatus and Equipment of Building — 17 points		
Blackboard, smooth surface of slate, liquid slating or painted board, easily reached by smallest pupil	2	
Desks, well preserved and well adapted to the sizes of the children	3	
Teacher's desk and chair, suitable to use	1	
Pictures, carefully chosen and arranged	1	
Bookcase, well made, and provided with lock and key	2	
Maps of county, State, United States, and in good condition	1	
Globe, carefully selected, and in good condition	1	
Charts, adapted especially to beginning grades	1	
Library, books chosen so as to meet needs of pupils (at least a dictionary)	4	
Broom, erasers, individual drinking cups, etc., in good condition	1	
Grounds and Outbuildings — 13 points		
Grounds, well-shaded, drained, fenced, good size, and neatly kept	4	
Cistern, good walls and top, with pump and conveniently situated	5	
Outbuildings, strongly built, properly situated, nicely painted, and well kept	4	
Course of Study and Organization — 25 points		
Course of study, state and county followed	5	
Graduation, uniformity	5	
Number of recitations, not exceeding 24	3	
Quarterly and final examination questions used	2	
Agriculture taught in the higher grades	3	
Attendance, regular, and prompt	4	
Tardies, few or none	1	
System of records well kept and accurate	2	
Teacher, The — 25 points		
Certificate, second grade or higher	3	
Salary, $40 per month or more	2	
Associations, county, township and state attended regularly	2	
Instruction, careful and accurate	8	
Discipline, kind but firm	6	
Reading Circle, member of, for present year	2	
Reports to district clerk and county superintendent promptly made	2	
Total points	100	

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CHAPTER III
3456
THE TEACHER

The Rural-School Teacher

For the changed conditions of rural life a new order of school is needed, and a new type of teacher is necessary for the new order. Too often the teacher of the rural school is a young person with city ideals and interests and not in touch with the rural needs, and again too often not qualified to introduce what rural life demands. It is not our disposition to criticize indiscriminately the rural teachers. Considering the short terms, low salaries, poor houses and equipment, and other discouraging features, the achievements of many rural teachers are to be highly commended. The drawbacks are such that only through heroic endeavor can they prepare for a new order, yet prepare they must, and the drawbacks must be removed as rapidly as possible.

Teaching is a great profession. Dr. W. H. Payne has said, "Teaching is the noblest of the professions, but the sorriest of trades." Teachers must never fail to rise to the appreciation of the greatness of their vocation, even though the trade side of it is yet so sorry that remuneration is often lower than that of domestic or street laborers. Human life is the finest thing in the world, and he who is called to the training and development of human life has the highest calling in the world. Only those who can so appreciate the greatness of teaching should enter the profession. The many who enter without this appreciation have detracted from the professional aspects of teaching and have made it a sorry trade for temporary employment.

580

In the making of the ideal teacher there are two sets of factors generally stressed: the first is natural equipment, the other is acquired preparation.

I. Natural Equipment

Teaching personality. The natural equipment of the teacher is sometimes treated under the term "personality." This is an elusive term, which has been variously analyzed. In a study made by F. L. Clapp, of Illinois, cited in Bagley's *School Discipline*, the following are given as the prominent factors of teaching personality which found place in lists by one hundred forty school superintendents, giving what they considered the good qualities of their best teachers: —

(*a*) Address
(*b*) Personal appearance
(*c*) Optimism
(*d*) Reserve
(*e*) Enthusiasm
(*f*) Fairness
(*g*) Sincerity
(*h*) Sympathy
(*i*) Vitality
(*j*) Scholarship

In another study, made by Professor W. A. Cook of the University of Colorado, a number of superintendents and principals were asked to select teachers they would least like to lose, and then to indicate from one to three qualities which contributed to the efficiency of each teacher selected. A suggestive list of qualities was sent to the raters, who were asked to add to the list as they wished. Scholarship was not placed in the suggestive list because the study aimed at native rather than acquired traits. Following is a list of leading traits with the number of times each was mentioned: —

Skill in instruction	88
Ability to maintain discipline	71
Sympathy and adaptability	58
Energy	55

Interest in extra classroom activities	50
Sense of humor	24
Health	23
Personal appearance	17

These lists, taken together, should be very suggestive to teachers wishing to know what traits to cultivate.

For those who still belong to the belated few relics of the past and who claim that the teaching personality is entirely inborn, this list is a study. Doubtless there are people who are irreclaimably deficient in one or many of these attributes, but the great majority are near enough to the normal to be able to improve themselves in every one of the commended traits. Young teachers, by persistent attention to these attributes, will soon note their own rapid improvement.

Important teacher-qualities

We offer a few comments on some personal teacher-qualities at least partly inborn.

1. **Good health, well preserved.** Good bodily conditions are absolutely essential to the qualities of mind and character necessary for wholesome teaching. Then the work of teaching draws heavily on the nerve and vital forces. It has been estimated that the nerve energy used up per teacher-hour is twice that per hour of ordinary office work. In addition to intellectual high tension, there is emotional strain due to the school government, with fear of unpleasant acts of children and parents. The strain is greatest on young teachers just beginning. After some years of service the nervous system of the teacher too often becomes a sign of his profession, such that he who runs may read. The teaching profession is no haven for delicate constitutions. The teacher should have a good body as initial capital, and its health should be daily guarded and conserved.

and lazy. In every respect the teacher's character should be an exemplary one. The true teacher is an inspirer unto truth and an interpreter of life; one who shows the way as did the Great Teacher. The true teacher is also possessed of the missionary spirit to carry the gospel of education to the needy anywhere at almost any personal sacrifice. This applies especially to the teacher in the rural schools.

6. Other qualities. Corollaries of truth as a quality are justice, fairness, common sense, candor, straightforwardness, and purity. The teacher of course must be just and fair in all dealings with pupils, fair in discipline, in marking and in opportunity. Partiality breeds disrespect. A teacher who is vain and too lenient in trying thus to court favor, generally produces the opposite of the desired effect, just as over-severity is also quickly condemned as unjust.

Opposite qualities to be avoided are sarcasm, ridicule, nagging, fault-finding, harshness, unreasonable strictness, and uncontrolled temper. "Whoever offends the least of these has committed a great offense against Him." There must be no great gulf between teacher and pupil. They should be on familiar and respectful footing with each other, creating a sweet interdependence.

II. Preparation

The teacher's preparation is generally analyzed into scholastic and professional factors.

1. Scholastic preparation. In the realms of knowledge which must be taught, the teacher should be a genuine scholar. He should be familiar with all the ordinary school subjects, and much correlative matter. To teach reading well, one must know and appreciate much of the literature of the world. And thus in every field the teacher's knowledge should be wider than the bare school subjects to be

taught. To teach a rural elementary school, one should at least be familiar with what should be included in a good rural high school. To teach in a high school, one should have the equivalent of a college course for graduation in the subjects taught, and related subjects. Some States already demand more than this, and no State should accept less except in an emergency.

Scholarship must be stressed as the first essential in preparation, and this must include the needed familiarity with subjects of special value to the rural schools, especially such subjects as agriculture in its various phases, rural sociology, rural economics, home science, and handicrafts. In the one-teacher school the teacher must have to handle all of these. In the consolidated school teachers may have specialties, yet all should possess the fundamentals necessary to the proper perspective and to correlations in the rural curriculum. A teacher without a knowledge of elementary agriculture, home economics, rural life problems, and without an appreciation of rural life and values, will be a misfit in a rural consolidated school even as a teacher of mathematics or history or literature, for there are rural applications and rural values in all of these subjects. Still more will such a teacher be a misfit in a rural one-teacher school.

2. Professional preparation. Though scholarship in the subjects to be taught is stressed as the first essential, the modern teacher should be more than a retailer of second-hand academic courses; he must be a thinker in his own field. There has been a world-wide growth of a professional consciousness and the recognition of a special field of scholarship and research calling for an independent profession of education. The center of this field is Child Psychology, which concerns itself with the periods of growth and development in children's life and experience, the measures for the most prudent direction of this development, the mate-

rials to be used, the social conditions in which the child is growing up after a while to fill his place in advancing the material and the spiritual progress of the race, — all of which lead into a profession the adequate mastery of which is as difficult as the task before the student of medicine or law.

The teacher's psychology has become genetic psychology, and by the side of this must be placed a child physiology and school hygiene. Sociology and ethics deal with the society in which the child is to be adapted. Education must consider the community, the larger neighborhood, and the whole State. All of these govern in the choice of material and the methods of presentation, — another field of study. Then there is the field of school management, organization, and the administrative aspects of education. Finally there are lessons to learn from the education of man as a historical development. Child study, or genetic psychology, social psychology, educational sociology, selection of material for the courses of study, method in teaching, and the history of our educational development, all enter into a professional course of study for the teacher. Skill must be added to professional knowledge to make the valuable teacher. Something of skill may be acquired in advance in a practice school, where expert supervision and advice may go far in directing experience on the right road, for not all experience adds to the teacher's value, since experience may crystallize bad habits and practices beyond reclaim.

For the elementary schools, the teacher should have the scholarship equivalent of that of a high school graduate, and, in addition, the professional courses of a good normal school.

For the high schools, the teacher should have the scholarship previously outlined — the equivalent of the requirements for a bachelor's degree in a good standard college or

university, and at least twenty per cent of these requirements should be elected in the School or College of Education. In California the requirements for the highest professional certificate demand a year of graduate work in addition to the above.

3. **Efficiency maintained.** Having fairly well prepared and entered the great work of the teacher, one cannot rest here. Education is necessarily a changing, progressive process, or else it fails to serve its time, all because civilization is a changing order. Education must fit for the life of to-day, yet it must anticipate to-morrow. This means that the teacher must be progressive. New work must be taken up by the school, new views must be sought of the old work, new and old must be correlated. We commend a saying of a great teacher, Matthew Arnold: "I would rather my pupils would drink from a fresh running fountain than from a dead stagnant pool."

4. **The teacher in service.** Happy should be the teacher always so well equipped. But probably the large majority of rural teachers are not so well prepared. These should not be discouraged. If the high-school, normal-school, or college education has not been their fortune, they can, by due diligence, prepare through summer schools and reading courses. These are becoming more and more efficient, and their aim is to assist teachers already in service to make up deficiencies, or to prepare for new subjects and to keep abreast of the times, Rural supervisors are increasing in number, rural superintendents are improving in quality, and all of these are helping in the improvement of rural teachers. Publishers advertise many helps for teachers, and never before have opportunities been so great for full preparation.

Governments are trying to eliminate unskilled labor in all industrial pursuits. A teacher lacking sufficient scholarship or professional preparation is like unto an unskilled laborer

whose work is to shape human lives. In all the world's work, is there anything which should call for more extended preparation or higher efficiency than the work of a builder of human life? There might justly be a legal inscription over every schoolroom door: "Let no one ignorant of his profession enter as master here."

Teachers' salaries

It has been set forth that a fundamental need in rural education is the consolidation of schools. But people have to be converted to this change, and the chief factor in this conversion must often be the teacher. Given the consolidation and still the schools would fail to readjust to rural needs if teachers remain unprepared for rural schools. It seems that the greatest need of country schools is a supply of teachers specially trained and equipped for rural service.

However, good teachers will prepare for this high calling in sufficient numbers only when the proper remuneration is provided. This remuneration should be such as to encourage talented men and women to prepare well and to enter upon teaching as a life's profession. It would seem that teaching in rural schools should bring larger salaries than in city schools. Then we can expect to hold good teachers in the country, and can hope for a redirection of the rural school for the best interests of rural life. Still, the beginning of the solution must be in the better preparation of teachers. Many taxpayers must be assured of better teachers if they are to vote larger salaries. The sacrifice must come from the teacher willing to prepare and trust to a progressive age to provide better remuneration for the professional teacher than for the unprepared one. Some cities now base salary increase in part on the completion of certain teachers' courses in summer schools. Some school boards permit sala-

ries for days spent in the institute and the teachers association. Some authorities are paying teachers for twelve months of the year. These are hopeful signs. Teachers must, through proper preparation and progress, and then through education of the public up to the proper appreciation of the same, gradually bring about the desired reforms.

QUESTIONS FOR DISCUSSION

1. How may experience be to the detriment of a teacher?
2. How does the quotation from Matthew Arnold apply to a teacher's daily preparation? General preparation?
3. Wherein are difficulties in the way of finished preparation to teach?
4. Wherein are difficulties in the way of increase of salaries?
5. Give reasons why rural salaries should be higher than city salaries? Why are they lower?
6. What are the services a summer school can render a teacher who started in with a good preparation? One who started with poor preparation?
7. What professional similarities between the teacher and the physician?
8. What are the different ways of getting into a profession? Why require license?
9. What are some natural traits which should debar a person from teaching?
10. Discuss the old-time dictum, "Teachers are born, not made."

BOOKS FOR TEACHERS

Cubberley, E. P. *Rural Life and Education.* (Houghton Mifflin Company.)
Chapter XII, on "A New Teacher," forms good supplemental reading.

Horne, H. H. *The Teacher as Artist.* (Houghton Mifflin Company.)
Page, David. *Theory and Practice of Teaching.* (American Book Company.)
An educational classic which eloquently dignifies the teacher and the profession.

Bailey, *Outlook to Nature.* (The Macmillan Company.)
Bryan, G. S. *Poems of Country Life.* (Sturgis & Walton.)

CHAPTER IV

ORGANIZATION AND MANAGEMENT

EDUCATION begins before the child enters school, and it continues after school days have passed. There are many of life's activities of play, pleasure, and industry continually at work for education. But the school is the only institution whose direct purpose is education. All other agencies exist for some other main purpose and are only incidentally educational. It falls to the school to be the chief organizer of educational agencies. The teacher must become an organizer of the ordinary work of the school, and also, in part, of many outside activities related to the school.

Probably the school plant should first receive attention, and a brief of the essentials of a modern plant are here given, preceding the discussion of the teacher's part in its organization each year.

I. THE SCHOOL PLANT

The school plant as a rule is determined by the community, and the teacher may not have had any voice in creating it. However, there will always be opportunities arising where the teacher may be influential for great good. A new plant may be possible, as in case of consolidation, or the old plant may be enlarged. The teacher should embrace every opportunity for betterment of the school plant.

The school grounds. The grounds should always be spacious to permit a yard in front for ornamentation, and one in the rear and side for playground. Where possible there should be space for a garden. In the case of a one-

teacher school this would call for a minimum of two acres, while from three to five acres are desirable. For a consolidated school, including the elementary and the high school of eleven or twelve grades, there should be twenty-five acres or more. Five acres should be considered a minimum, but the ideal calls for a small farm and a home for the principal.

A neat fence should enclose the ground, and separate certain portions for exclusive use of boys and of girls. Good hedge fences may serve for divisions. The girls should have ground for some exclusive games, and the boys also should have their territory, yet there should be space for games including both boys and girls. Grounds for volley ball, croquet, and basket ball are suggested for girls, and a ball field surrounded by a team track for boys. The smaller children should have ground and apparatus suited to their needs. Grounds for planting and for keeping pets also are desirable.

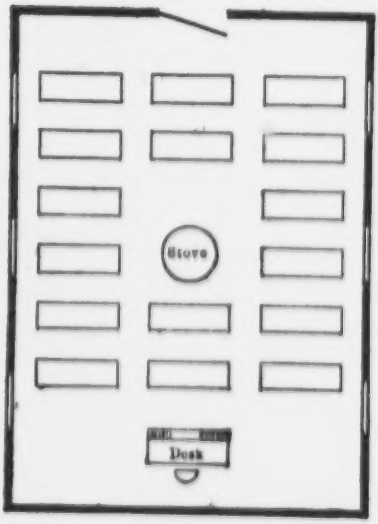


FIG. 3. A TYPICAL PRESENT-DAY INTERIOR

(From Cubberley's *Rural Life and Education.*)

The schoolhouse. The one-teacher school should have more than one room. There should be a cloakroom for boys and one for girls. There should be a main schoolroom for general work, and an adjoining room which may be used for home economics and for primary classes. A workshop is needed for manual training and a small room or alcove for a library, though the latter may be provided

for in one corner of the main room. Where a new building is to be built, the teacher should urge the plan for a complete plant. If the school is a consolidated one, rooms for all the necessary school activities should be provided. Schoolhouses should be planned with as great care as are dwelling-houses. It is too often the case that rural schoolhouses have been built with almost no consideration of the real problems of education.

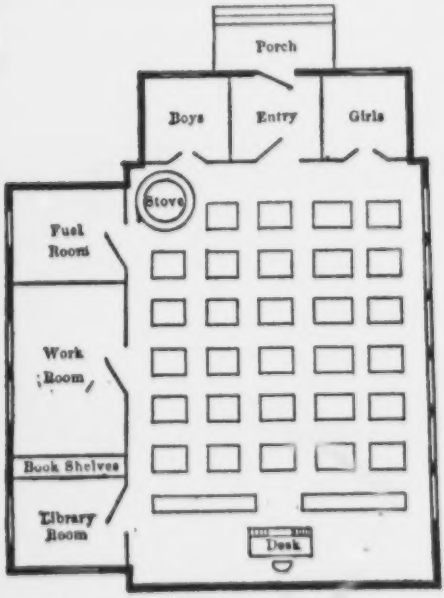


FIG. 4. A REARRANGED INTERIOR

Remodeled along good educational and hygienic lines, and new equipment and some conveniences added. The three windows on the left have been made into doors, and the frames and sashes moved to the right side. Compare with Fig. 2.

In some cases houses have been built with a serviceable basement, and a second-story room. In the basement are the heater and a workshop equipment, and sometimes indoor play space for rainy weather. When a water system can be had, indoor toilets should be provided, and these may be in the basement or in connection with the cloak-rooms. In general it is not advisable to have play-rooms in the basement without sufficient light and ventilation. Much better is it to have a large play-shed in the yard.

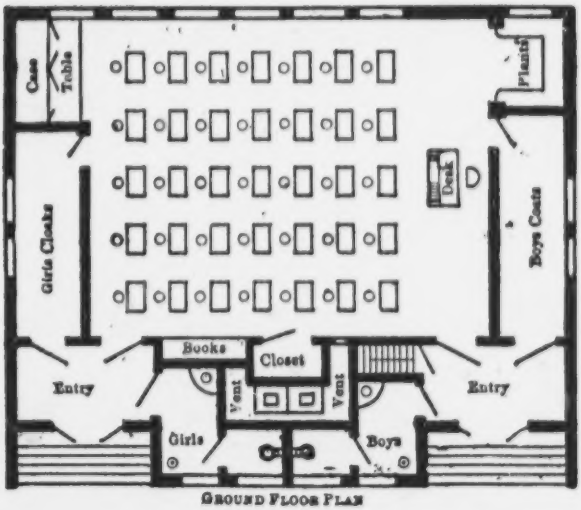
Windows should be arranged so that the light comes from the left of the pupils, never from the right or the front. If

light comes from the rear it should come from high windows, so as not to cast body shadows on the desks. Shades of good quality and green or olive in color should be adjusted to fit the windows and to be lowered from the top or raised from the bottom. The light should be very carefully regulated, so that shadows do not fall on the books or work of the pupils, nor bright light injure the eyes of pupils or teacher.

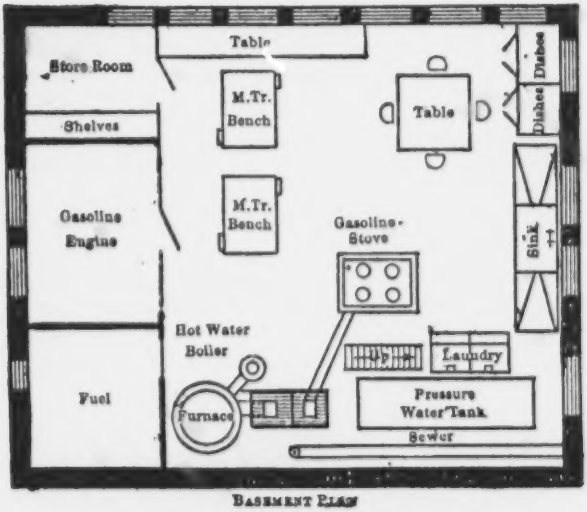
Heating and ventilation. Heating and ventilation should also be provided for in accordance with some modern system. The old-fashioned stove in the center of the room is a condemned system. If only a stove can be had, better a jacketed one equipped for ventilation, for it is as important to extract the impure air as it is to take in fresh air. Several regular heaters for such purposes have been devised, and these are rapidly going into schoolrooms where steam or hot-water systems are not available. These are not expensive and can be adjusted to any rural schoolhouse. The health of school-children demands the proper heating and ventilation, and no good work can be done under improper conditions of the same. Pure air is an essential to human life. Headaches, inattention, poor memory, and apparent stupidity in pupils are often due to faulty ventilation of the room.

The very best results are now being secured in open-air schools, and the attention of the world is turning in that direction. Rural schools might have movable equipment to shift readily to practicable outdoor places in favorable weather.

The water supply. The open bucket and common drinking-cup have also been condemned as menaces to public health. Water is a chief agent in transmitting disease germs, and no school authorities can be excused for not heeding the teachings of modern science on this point. Open wells or cisterns and springs should be avoided, and some type of



GROUND FLOOR PLAN



BASEMENT PLAN

FIG. 5. A MODEL INTERIOR FOR A ONE-TEACHER RURAL SCHOOLHOUSE

Still another and a better plan would be to use the attic for manual training and domestic science and the basement for an indoors playroom. A curtain or a slatted door can be used to close off the plant-room, if the light is too bright. The water-pressure tank provides water for the toilets, lavatories, and drinking-fountains found in the lavatory-rooms. (From Cubberley's *Rural Life and Education*.)

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bubbling fountains should be provided. There are several of these, some so simple as to be attached to an ordinary water-cooler. Any county superintendent can furnish information about these. The best system is one of a more

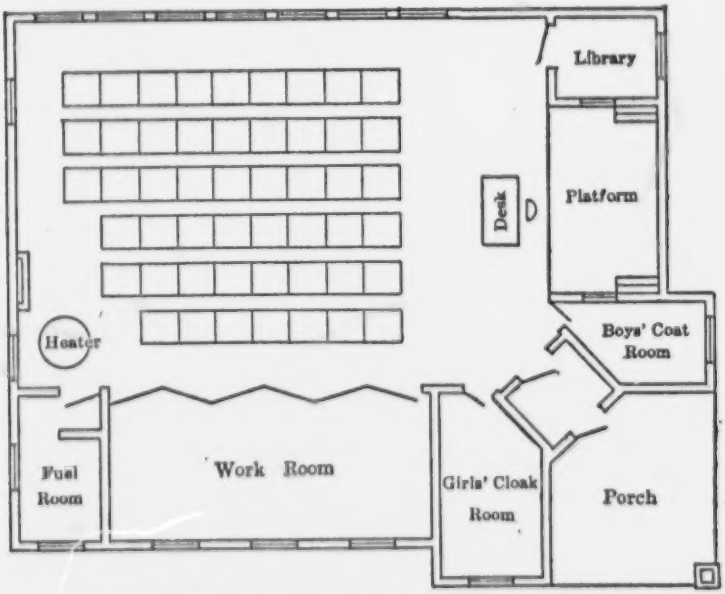

FIG. 6. A WELL-ARRANGED RURAL SCHOOLHOUSE

Designed by the faculty and students of the State Normal School at Emporia, Kansas; cost, about $1800 to $2000. For a total cost of from $2500 to $3000, a basement can be put under the entire building, to contain a furnace, fuel-room, pump, pressure-tank for running water, gasoline engine, and play-room for rainy days, and closets, lavatories, and a drinking-fountain installed in the coat-rooms above.

permanent nature, consisting of a pressure tank and force pump connected with a well or cistern, and this will supply a bubbling fixture for one or more schoolrooms.

Blackboards. There should be blackboards in all available spaces around the walls. These should be about forty inches wide, the lower edges bounded by chalk troughs three feet from the floor. About ten or twelve feet of this board should

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extend as low as two feet from the floor, so that the small children may use it. Where this has not been so built, a step platform may be made about a foot high for small chil-

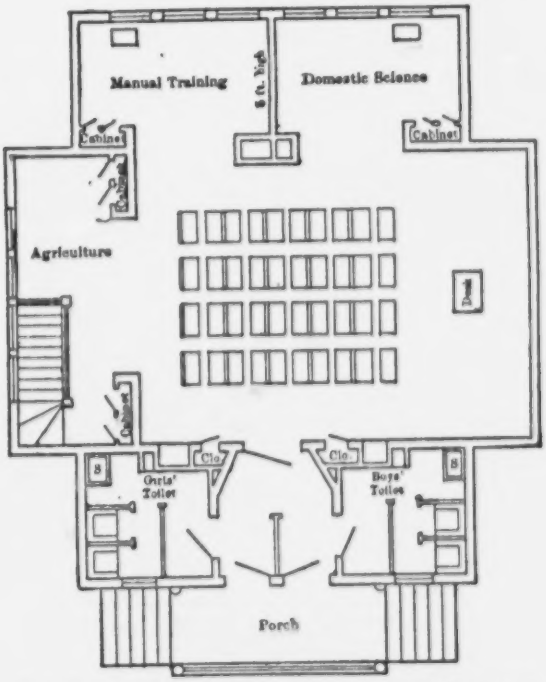

FIG. 7. THE MODEL RURAL SCHOOL AT MAYVILLE, NORTH DAKOTA

The especial feature here is the arrangement of the main floor. The basement, to which the stairs lead, is used for furnace, playroom, and water storage for the school. This school would naturally cost more to build than the Emporia school, but it is a much better type. In such a school the best of a modern rural curriculum can be taught.

dren to stand upon so as to reach the boards. One or two small boards extending above these regular boards, in convenient spaces, would serve to put up the schedule or any work to remain some time without being in the way. The

best color for these boards is green, since this color is restful to the eyes, and it shows the chalk-marks as distinctly as does black.

School desks. There has been great improvement in school desks also, yet rural-school surveys show an astonishing number of the old-time long benches still in use. Patent desks are made in sizes adapted to various ages, and some of these adjustable so that the seat may be raised or lowered and the desk-top set in or out. If patent desks are to be bought, it will be better to get adjustable ones. Bad postures of school-children, and long, tiresome hours of

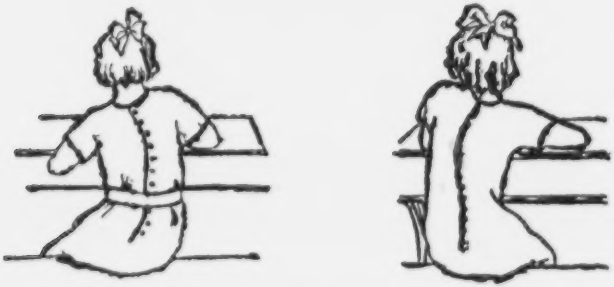

FIG. 8. DESK TOO HIGH, AND THE RESULT
(From Terman's *The Hygiene of the School Child.*)

sitting, are responsible for many after evils, such as spinal curvature. The school should conserve and develop every child for the best possible life, and surely physical growth should not be thwarted for small economy of any kind.

For rural schools the very best plan is to use small tables and chairs for the younger children of probably the two lowest grades, and special school chairs for the older children. These special chairs are made with a drawer under the seat of each to hold books, and with various devices for writing surfaces. Chairs are more comfortable, and can be quickly rearranged or removed for special occasions.

There should be a teacher's desk, with several drawers to lock securely. When there are two or more grades or groups in a room, recitation benches should be conveniently placed for blackboard and other conveniences, so that a portion of the children may recite without disturbing the study or desk work of others. Chairs may serve even better for recitation purposes. There should be a chair for the teacher, extra chairs for visitors, and a desk or table for the dictionary and reference books.

Other equipment. Every school should have a good library in bookcases which may be securely locked, a large globe and a small one, sets of wall maps, a sand-modeling table, a clock, a bell, and all needed tools and buckets for caring for heating, lighting, ventilating, and cleaning the buildings; also some tools for yard and grounds. There should be convenient arrangements for bathing hands and faces, and a supply of rolls of paper towels so as to avoid the common towel, which is another condemned article. If flies and mosquitoes are troublesome, window and door screens should be used. Cloth netting may be tacked over the windows when wire is not available.

There should be wires along the walls at convenient places for hanging specimens of best work. Picture moulding is another need for convenient hanging of pictures, and a few copies of choice pictures should adorn the walls of every school. These pictures should represent the best available in the world of art. A small pair of balance scales, with scoops and several weights; measures of various capacities, half pint, pint, quart, gallon, peck, and half bushel; footrules and yardsticks and other measures for use in arithmetic; clock dials, tin money, are all essential. Doubtless there should be other equipment good teachers will need, and yet there are many schools without the first essentials of a modern school plant.

II. Organizing the Plant

Before the opening day. The teacher should visit the school-building some days before the opening day to inspect it, with its grounds and equipment. The following items should be noted: the grounds as to cleaning and arrangement; the repairs needed for fences and other outbuildings; the provisions for wood and coal; the water supply; rooms and hooks for hats, coats, and lunch baskets; the condition and arrangement of seats; the blackboard, erasers, and chalk; the bookcases, dictionary, and other books; the condition and adjustability of windows and blinds; the pictures, wire hangers for school work, and other needed things. The schoolroom may need scrubbing, windows and walls need cleaning, desks and woodwork some painting, and grounds a clearing and laying off for play and beautification. If a consolidated school, the teacher should give a memorandum of needs to the principal, who is directly responsible to the trustees. All the teachers of the consolidated school should meet at the call of the principal to discuss the needs and the preliminaries of organization, then all should coöperate in securing community assistance. If it is a one-teacher school, the teacher should give the memorandum of needs to the chief trustee, should agree with him on a community meeting on some date to have a school cleaning-up and equipment day, and coöperate with him in inviting people out so as to interest them in this preliminary work. Women may aid in cleaning up, making shades, and equipping for home science. The teacher must be the moving spirit in all this. Country people are often indifferent through custom, but when thoroughly aroused they become greatly interested, and such a preliminary day would prove a welcome diversion for many. There will be an immense gain if community help and interest can thus be organized from the beginning.

Assistance of pupils. When it is not practicable to get the community or some of its people for this, the trustees should be induced to make certain repairs and furnish supplies, and the teacher should organize the pupils to continue the work. In any event the larger boys should be enlisted to build a large play-shed for use in bad weather, and gradually to add to the playground equipment. They can build posts for basket-ball and volley-ball, make horses for hurdle races, put up horizontal bars and swinging-rings for exercise, and make arrangements for high jumping. Tools may be borrowed from home, and material secured through trustees, through donations, and through special pay entertainments. All this may be made most valuable work in manual training. A community carpenter may be interested in helping with a large undertaking, such as framing the play-shed or an additional room to the schoolhouse, the work to be finished by the boys. The girls can make tennis, volley-ball, and croquet grounds, improve the walks, set out shrubbery, and make flower plots. Around the school plant and its equipment the boys and girls should be organized into a community of common interest and endeavor, every one contributing to the welfare and happiness of all. The teacher should keep in mind that all this is vitally educative, not merely a side issue.

Preliminary pupil organization. The register, class-book, and other records of the school for the preceding year should be secured. If the school is a consolidated one, these records should be secured for the children likely to come to the teacher for the first time. If the teachers have special subjects, under a departmental plan, each should carefully note the record of work done by pupils in other subjects. The superintendent or principal should furnish the record books and blanks, and when giving these out to teachers this officer should supply them with preceding records, all to be

returned with the closing report at the end of the session, the final salary payment to be conditioned upon the faithful keeping and returning of all required records.

Especially if the teacher is going to a school for the first time will it be very helpful to talk it over with the preceding teacher. And it will be very considerate and well-bred of the preceding teacher, when practicable, to communicate with the new teacher to assist in arranging a conference.

With such preliminary records on hand, the teacher should plan work for each child and each class, beginning with the very first day. In general, the work for the session should be planned, subject to necessary adjustment. For practically every State there is a state course of study and teacher's manual prepared by the state superintendent of schools. This should be secured and followed as faithfully as practicable. It will serve as a good guide in subjects and methods.

Classifying and seating. The preliminary information should be a guide to the teacher in arranging school desks and recitation seats for the first day. Where additional desks and rearrangements are needed it will contribute greatly to have these attended to before the first day. The teacher then may have a roll ready for the first day, may check this up and correct it in a few minutes after the general opening program, may assign seats to each child in accordance with the general plan for all, may assign lessons for the day, and start everybody at work regularly and so promptly as to create an excellent impression.

It is highly important that the teacher assign seats. This may be done in the beginning without apparent suspicion, and may have great influence on future discipline. Some pupils may demur, but the teacher should be good-naturedly firm, expressing the intention of making changes as needed. Troublesome children will flock together unless the teacher

is skillful in arranging them. A diagram of seats assigned will help the teacher to learn the children at sight. The desks or chairs should be arranged so that those of the same size are together, not a small size in front of a large one. The smaller children should be kept in the most comfortable part of the room. In the rural school the greater part of the school day is spent at the desks, hence great care and much thought should be given to the seating of the pupils. Some good book on "School Hygiene" should be read for further guidance.

III. Organizing the Work of the School

The course of study. It seems that many difficulties are presented in the needs of the school plant, its grounds, buildings, and equipment, yet difficulties fairly bristle around the course of study and the schedule of work. Reorganization so as to include different studies and activities, and redirection of the old studies are both demanded. In Chapter II, under the topic, "Broadening View of the Rural School," various types of life's interests were presented for representation in the work of the school. These were the physical, the intellectual, the æsthetic, the industrial, the social, and the moral and religious. In organizing the course of study these interests should find place; none should be neglected. In the old school, the work narrowed down to a smattering of the intellectual, and the majority of rural schools are still working within these narrow limits. The present age is calling for the broadened work. The activities and needs of rural life must shape the work of the country school. The course of study and the daily schedule must be made with these in mind.

Reading must be stressed in the new order as in the old, for reading is the doorway to past knowledge, and it is one

of the most useful accomplishments. Writing will figure in the new about as in the old. Spelling is all-important, yet a more rational list of words is being worked out. It is claimed that time is wasted in learning many useless words. Arithmetic also is a fundamental, but here time has been wasted on unnecessary things. The simpler essentials are to be selected, and more applications made in farm-life arithmetic. History and geography must be retained, but these must be adapted to rural needs and taught so as not to be so barren and wasteful. Language and grammar are old friends to be retained, but much more attention should be given to language and much less to technical grammar. Hygiene, literature, art, agriculture, domestic science, handicrafts, and the social and moral life must find larger place. The *how* of all this presents a great difficulty.

Possible reorganizations of the school. Another difficulty appears in a scheme of classes and years. The grouping which somehow came to be accepted in most schools is one assigning eight years, or grades, to the elementary school, four years to high school, and four years to college. This is an unnatural grouping. The work of the elementary school is not suited to the child in the seventh and eighth grades. The beginning of adolescence has set in then, and new interests must be met. Under this old system, children drop out of school too rapidly from these upper elementary grades.

One proposed solution is to divide these grades so that the high school shall begin with the seventh, thus making the plan six and six. This has many advantages over the eight and four plan, and the underlying principle is partly discussed under periods of child development, in a following chapter.

Another solution has been already put into practice in many States, in Kansas City, in the University of Chicago elementary school, and in other places. Owing to the too

great length of the elementary school and the barrenness of the eighth grade, this grade has been discarded, and the elementary school has only seven grades. This gives a seven-four arrangement, which is working quite satisfactorily, with a year gained for the child. A better arrangement under this plan is a six-five grouping, six years for the elementary school, five for the high school. Then, when two more years can be added, these will be Junior College years. This grouping works out as follows: —

Elementary school, first six grades.
Junior high school, grades 7, 8, and 9.
Senior high school, grades 10 and 11 (or 10, 11, and 12).
Junior college, grades 12 and 13 (or 13 and 14).
Above these would be the senior college or university.

Either solution is better for rural schools than the old grouping. In the one-teacher school, even six grades are too many, and no more should be assigned to one teacher. If the seventh grade is transferred to the high school, studies better suited to the interests of the children may be taken up, and not so many will then drop out of school here. The plan is flexible for any type of consolidation. The central school in a group of three or more rural schools may add extra rooms, take on other teachers, and develop a junior high school, if not further. After the sixth grade, the pupils from the other schools should attend the junior high school, and, when possible, after this the senior high school and college most available.

Alternation of classes. The daily schedule will be different for each of these groupings, depending upon whether the teacher must plan for only six grades, or for seven or eight grades. The schedule difficulties are less in a consolidated school.

In the best high schools, the class recitation periods are

forty-five minutes long. In many rural schools the periods are only five to fifteen minutes long, with nearly thirty or more recitations each day. If rural schools would combine so as to give not more than two grades to a teacher, great advantages to the children would ensue.

The making of a schedule for a rural school so as to introduce the new subjects, and to include all of the elementary grades, is quite a problem. Where consolidation does not help out, various devices must be resorted to, the chief of which is alternation of classes. If planning for only six grades, the fifth and sixth may be classed together in arithmetic, history, geography, reading, etc. One year they take the work of one grade, the next year the work of the other grade, so planned that either may be taken first. In some things the third and fourth grades can work together by alternation. If there are seven grades, the sixth and seventh may combine, also the fourth and fifth in part. If there are eight grades, the combinations would be the seventh with the eighth, and the fifth with the sixth.

In arithmetic, after pupils learn the fundamentals in addition, subtraction, multiplication, division, and simple fractions, one year's work may cover denominate numbers and mensuration, another year percentage and interest. Either year could be taken first. In advanced history or geography, the book may be divided into halves, and either half taken first. In reading and literature, spelling, agriculture, domestic science, etc., the work may be similarly planned. This will reduce the number of classes, and give longer time to each class.

In every State there is some official course of study, generally planned by the state superintendent and his helpers. A State Manual outlines the course for teachers, and often supplies suggestive programs. The teacher can follow approximately the course prescribed, and yet apply the

above principle of alternation. Ohio's *State Course of Study* (1915), says: —

> This course has been so planned that the seventh and eighth years' work can be alternated in everything except grammar; the fifth and sixth grades can be alternated in everything; the third and fourth can be alternated in all except arithmetic; and the first and second years' work can be alternated in language and nature study.

The Michigan *Course of Study* (1914) says that the seventh and eighth grade grammar may alternate, it being immaterial whether syntax or etymology is taught first.

Alternation has been thoroughly tested and approved, it being a practice in Michigan, Minnesota, Ohio, Illinois, Massachusetts, and many other States. It should be used to reduce the number of classes to the least, except that it should not be used where it makes classes too large. Every rural teacher should study plans for using it in the making of the program.

The "Suggestive Program" shown on page 53 is too crowded, and it clearly shows that more teachers are needed for so many grades. The schedule should provide for longer periods, and should have five minutes, midway in each of the four parts of the school day, for a rest or informal period in which pupils may move about and whisper, get a drink of water, air the room, and do other such things without disturbance.

Using older pupils as teacher-assistants. Nearly always there will be some older pupils who can be quickly shown how to assist with the younger ones. These older pupils should be appointed for this work. It will be very helpful for them, and will permit the teacher to give more time to other things. After a teacher has taught a reading or number lesson to first or second grade, some older pupil, who has been called to watch the lesson, can carry on the drill by

A Suggestive Program for a Rural School of Eight Grades and One Teacher

Time	*Minutes*	
8.55 to 9.05	10	Opening, Singing, Scripture, Talks, etc.
9.05 to 9.20	15	Read and Spell, IV.
9.20 to 9.30	10	Reading, I.
9.30 to 9.40	10	Reading, II.
9.40 to 9.55	15	Read and Spell, III.
9.55 to 10.15	20	Arithmetic, V–VI.
10.15 to 10.35	20	Arithmetic, VII–VIII.
10.35 to 10.50	15	Recess.
10.50 to 11.00	10	Numbers and Stories, I–II.
11.00 to 11.10	10	Arithmetic, IV.
11.10 to 11.20	10	Arithmetic, III.
11.20 to 11.30	10	Writing, Drawing, I to VII.
11.30 to 11.45	15	History, Geography, VII–VIII.
11.45 to 12.00	15	History, Geography, V–VI.
12.00 to 1.00	60	Noon Recess.
1.00 to 1.10	10	Singing, Speaking, Story, etc.
1.10 to 1.20	10	Nature, Geography, IV.
1.20 to 1.35	15	Reading, I and II.
1.35 to 1.45	10	Nature, Language, History, III.
1.45 to 2.00	15	Classics, Language, V, VI.
2.00 to 2.15	15	Classics, Grammar, VII–VIII.
2.15 to 2.25	10	History, Language, IV.
2.25 to 2.40	15	Recess.
2.40 to 3.00	20	Agriculture, VII–VIII, Monday, Wednesday, Friday. Domestic Science (girls), Manual Training (boys) Tuesday, Thursday. The above 20 minutes for lesson and instruction to be followed, when practicable, with practice from 3 to 4.
3.00 to 3.15	15	Hygiene, Handicrafts, III–IV.
3.15 to 3.30	15	Hygiene, Story, I–II.
3.30 to 3.45	15	Physiology, Spelling, V–VI.
3.45 to 4.00	15	Civics or General Science, VII–VIII. When not out for practice from 3 to 4.

This program shows how other subjects may be alternated so as to give more time for newer types of work. If there is a school garden, agricultural practice may be had part of the year. If a small equipment for Domestic Science can be secured, then practice may be had in this, and likewise for Manual Training. If this practice cannot be had at school, then instruction should be given in all of these for home practice in club work or the like.

If the seventh and eighth grades can be transferred to another school, the time given to these may be distributed to the other six grades.

Since every rural school requires pupils to spend so much time at the desks, every good program should specify work for recitations and also for intervening time. Complete the above program.

showing cards for sight work, and by pointing to figures to be combined for number practice. Older pupils can conduct spelling lessons and correct written spelling. This will make the older ones more thorough, and it will help to organize the school into a wholesome working community. Different ones may be assigned these duties in turn, thus not making it a burden.

More will be said about the course of study and the corresponding work of the school when we come to Part II, where we take up the school subjects one by one.

IV. Organizing Recreation

The value of play. Recreation includes any diverting or pleasurable exercise or employment. These are highly important in the life of the people. Rural life is somewhat lacking in opportunities for diversion, and, indeed, rural people often rank play along with idleness. But play prepares for life and enriches life, and the play spirit should be kept alive through childhood, youth, and age. Recreations include plays, games, festivals, pageants, dramatics, camping, fishing, hunting, hiking, picnicking, mountain climbing, and the like. Many-sided recreation will keep alive the joy of living. We should begin with the plays of children to make permanent investments for joyous living.

Play has many life values — physical, mental, social, and moral. It must enter into the vital activities of school life. Hence it should be thoughtfully prepared for, as much so as any other necessary activities. Play equipment has been stressed, including ample grounds and plentiful apparatus.

Supervision of play. Teachers must plan for play periods, and supervise play and games systematically, though part of the time the children should be left to their own freedom and choices. If necessary play should be made compulsory

during the shorter recesses. The timid and the indifferent must be drawn in. Zest will be added by the teacher's joining in the games. This need not be the case every day, though it should be so the majority of days. New games should be taught, groups of children organized, and the grounds and apparatus planned and kept in good condition. Committees of pupils may be appointed and duties assigned. An older pupil may be detailed each day to go out with the younger ones, who are sent out earlier than others, when the teacher must remain in for other classes. The older pupil may start them doing things, and keep a watchful eye over them. Again we insist that this will be highly educative for the older pupils so assisting. For both work and play the school should be organized as a coöperative community.

Grouping of pupils in play periods. For the organization of play school-children may be loosely grouped into about three groups: (1) grades 1, 2, 3; (2) 4, 5, 6; (3) above grade 6.

The first period. About the time a child enters school a transition period begins. Before this the play is more free and unorganized. Now the child is awakening to competition, to a sense of skill and power, and a tendency to play with other children is increasing. There is a constructive interest in making things. Games for these should be competitive and call forth varied activity, and making things may be made very absorbing. Some games for this period are as follows: bean bags, jumping the rope, tenpins, chasing and hunting games, teetering, swinging the rings, playing Indian, and other make-believe games. A slide is a never-ending source of pleasure to young children, and a sand-pile or sand-bin is likewise. Children will play continually with these with little supervision needed.

Boys will make bows and arrows, sailboats, popguns,

whistles, and the like. They will dig caves and build shacks or tents. Girls will make doll dresses, paper outfits, baskets, doll houses, weaving products, and bead combinations. Both boys and girls like to draw and paint.

In the second period, with children about ten to twelve years, interest is heightening in coöperative games, collections, use of tools, playing musical instruments, making tree houses, snow forts, insect nets, dams, gardens, etc. Wrestling, leapfrog, jumping, racing, throwing quoits or horseshoes, baseball, acrobatic performances appeal to boys. Girls will still play at dolls, jumping the rope, tossing bean-bags, ring-toss, basket-making, and weaving. Boys and girls will play croquet, crokinole, playground ball, volley-ball, tennis, and tether-ball. They pass from the slide to coasting, skating, and bicycling. Gardening is interesting to both. Drawing, coloring, dramatics, and puzzles are interesting for all children. Constructive interests are in the direction of real life. Boys will make bird-houses, chicken-coops, milk-stools, hammer-handles, hurdle-horses, windmills and watermills, furniture, etc. Girls will cook, play keeping house, make useful articles to wear, raise flowers, etc.

The third period, beginning at about thirteen years of age, is the period of transition, dawning with puberty and adolescence. There is rapid physical growth and a change to social ideals. Boys become more manly, and girls more womanly. Physical powers, hero-worship, love of adventure, fondness for hunting, camping, and visiting appear. General interest in reading is strong, and dramatic interest is at its height. Games and play should develop the larger muscles and the finer adjustments, and should involve social qualities. The outdoor gymnasium and the indoor workshop should be equipped to attract boys and girls. Parlor games, charades, folk-dances, pageants, play festivals, and theatri-

cals should be planned and encouraged. All types of ball are now in place, except that basket-ball is as yet rather severe for girls, unless played moderately. This is a time for agricultural clubs, school fairs, literary societies, musical clubs, spelling-bees, boy scouts, camp-fire girls, and all those vital recreations of lasting value in community life. Many other plays, games, and recreational activities may be added to this merely suggestive list.

Out of these possibilities the teacher should select the most promising beginnings, secure apparatus, and organize the children to enter into the plays selected. As children tire somewhat of the first games, new ones may be brought in, though these should not be taken up too rapidly. The learning of a game is not interesting, yet children must be kept at a new game until interest comes, and it will come in any of these true and tried games. The teacher should not be too "bossy" on the playground, and should not supervise so closely as to interfere with that spontaneity which is the life of play; and yet the playground must be made an organic part of the life of the school.

Books and play apparatus. Space will not permit us to describe in full these games. Some of the States are issuing manuals for this purpose. An excellent one, styled, *A Practical Recreation Manual for Schools*, has been issued by the state superintendent of public instruction of Oregon, Honorable J. A. Churchill.

A small, inexpensive manual may be had from Ginn & Company. This is, *What to Do at Recess*, G. E. Johnson. (25 cents.)

OTHER GOOD BOOKS

Bancroft, Jessie H. *Games for the Playground, Home, School and Gymnasium.* (The Macmillan Company.)

Curtis, H. S. *Play and Recreation.* (Ginn & Co.)

Excellent. Is rural throughout.

Burchenal, E. *Folk-Dances and Singing Games.* (G. S. Schirmer, New York.)

Johnson, G. E. *Education by Plays and Games.* (Ginn & Co.)
Excellent.

Leland, A. L. and L. H. *Playground Technique and Playcraft.* (Doubleday, Page & Co.)
This book, vol. 1, gives excellent instruction about laying off grounds and making apparatus. It gives measurements, diagrams, etc.

Chubb and others. *Festivals and Plays.* (Charles Scribner's Sons, New York.)
Outlines many Festivals and Pageants.

Forbush, W. B. *Manual of Play.* (American Institute of Child Life, Philadelphia.)
A very full, complete book with play theories and suggestions, and many play devices. The last three books are more expensive, but these should be placed in the library of every rural school.

Beginnings in play organization. The teacher might begin with the two small books by Johnson. The whole subject should be discussed more in teachers' meetings, and play schemes should be secured from one another. The devices that will require least supervision with small children are the sand bin and the slide. The sand bin should be in the sun part of the day, and now and then it should be thoroughly stirred and freed from bits of paper, bread, and the like. This will keep it wholesome. Sometimes rural people complain that the slide wears out clothes, but if it is well polished the wear is insignificant, and children delight to use it. Swings are good, though these may be monopolized by a few, whereas many can use the slide and the rotation takes care of itself. Teeters are also good. All of these may be home-made.

A rope stretched about seven feet high may serve the purpose instead of the net for volley-ball. Boys can quickly make the board for tossing the bean-bags, and girls can readily make the bags for beans. These bags should vary in weight. Horseshoes may easily be found by the boys for the pitching game, a game often indulged in by men of all ages. These items are mentioned in a supplementary way to indi-

cate how easy it is to make some beginnings, and thus to encourage many teachers to undertake the stimulation and partial direction of school play. No teacher should be afraid of falling from dignity through engaging in play with children. It will bring about a delightful comraderie not otherwise to be had. It will make for better lessons, easier discipline, and a more wholesome, symmetrical child development. Play furnishes good physical culture, good mental culture, good social culture, good moral culture. What school subject can do more?

V. Organizing the Community

School events. School recreations often involve the larger community, which should be drawn into these recreations with the school. The school is now frequently referred to as the natural community center. The teacher is the organizer of the school, hence the teacher should have to do with and be interested in certain organized movements of the community. The school can be made a great center of recreation. In the first place, special school days for the exhibit of school work are stimulating to the children, more so when the grown-ups turn out to inspect. The celebration of the landing of Columbus, Hallowe'en, Thanksgiving, Washington's Birthday, Bird and Arbor Day, or May Day may furnish the opportunity for an exhibit of work collected from the best specimens, as well as for a special school program, and an invitation to community members to spend a half day with the school.

A yearly school fair where several schools, probably the schools of a county, come together for an exhibit of the school or agricultural work of the children, is coming into favor in many States. This is a great incentive to better school work in every school, and it furnishes such a valuable

day for a community social gathering on a large scale. Every rural school can do much to furnish the matters of common interest to bring the people together. A literary society may be organized in the school, and general meetings may occasionally be held when older people are assigned to some of the places on the program. If there is musical talent in the school and the neighborhood, the teacher may bring this together into a club organization. Every member may be stimulated to endeavor in his specialty, probably a band organized, a quartette or glee club developed, and a special musical night made a rare occasion. At least the school can practice songs and sing on the special school occasions.

In such ways as these can the school furnish the affairs of common interest to bring the community together in a way helpful to the school and also to the community. More opportunities for recreation are needed to overcome the isolation of rural life. The people, young and old, will be made happier, and all will respond more readily to the needs of the school. Many teachers oppose special programs because these break in on the regular routine of the school. But the interference will not be so great when the programs grow mainly out of the work of the school, and then more life will be put into the work of the school; also the community will develop a finer school spirit of value to the school in many, many ways.

Special-day programs. Under the direction of State Superintendent M. P. Shawkey, of West Virginia, a pamphlet, *Hand Book of Suggestions and Programs for Community Social Gatherings at Rural Schoolhouses*, has been prepared by L. J. Hanifan, state supervisor of rural schools, for use in that State. It is a valuable help to teachers, and has inspired many to undertake the movement.

Programs should be made according to the community interests and conveniences. Some should be held in the day

time for special exhibits, plays, and athletics, while others should be held at night. If the schoolhouse is not provided with lights, lanterns may be borrowed, or candles may be used, though a few good lamps would be much better. Some men in authority may be asked to look after good order on the part of any irresponsible outsiders who might want to be boisterous.

Suggestions have already been made for a music evening. Radiopticons, or instruments to reflect pictures on the wall from ordinary postcards or similar pictures, are now getting so common and so low in price that every community should have one, which might be called upon for a travel evening. Different ones may bring in postcards or pictures, and the teacher can make collections, such as of Children in Many Lands, Our Island Possessions, the Grand Canyon in Arizona, the Cliff Dwellers, Cities of the United States, etc. Children and community members may tell stories of travel.

Old-time spelling-bees can be held several times during the session, sometimes in the evenings, sometimes as a part of a day program. All present should be chosen to spell.

It should be easy and interesting in any community in the United States, to give an Indian program and a local history program. In connection with these, stories of pioneer days and later progress may be given, and spice may be added to the local history evening if the school-children with others prepare a mock newspaper of current history, though this should be carefully censored to prevent imprudent sayings which might give offense.

Other suggestions for community effort. In the arrangement and conduct of community programs, there should be a program committee to assist the teacher, and community members should take places on the programs; that is, these should not be exclusively school programs. A great May Day Play Festival for the entire community is becoming

quite an event in some localities. A May Queen may be chosen, and the children may crown her and dance about her. It should be made a care-free day of frolic and fun for young and old, something in spirit like Mardi Gras days in New Orleans. The procession of the seasons and the joyous awakening of new life of spring should supply the main setting of the occasion.

Athletic events, boys' and girls' clubs, and school credit for home work are valuable features of modern rural schools, bringing the community in touch with the school and the school in touch with rural life. These will be treated in another connection later on in this book.

This program for the school may seem overpretentious, even alarming to some teachers. But keep in mind that the old order of rural school must give way to the new, which is to relate the activities of the school to the needs of rural life.

Some rural-community characteristics. In going in and out among people of the community, the teacher should take an active interest in the affairs of all. This should be a genuine sympathetic interest, and such will soon bring sympathetic responses in words and coöperation so needed by every teacher. It is often difficult to appear impartial when some people are so much more lovable or congenial than others. Especially is this true in dealing with children. Country people are inclined to watch out for partialities, and to be jealous of their rights. They breathe an air of freedom and are naturally individualistic, democratic, and champions of the doctrine of equality. Hence the teacher should seek ways of manifesting an impartial interest in all, just as if making neighbors for life.

Another warning may be given the rural teacher. Country people are often gossipy. Having so few distractions, they interest themselves more minutely about petty neigh-

borhood affairs. They are often quite willing to chat about these as the teacher goes their way. They may tell the teacher some really valuable things to know about family peculiarities and the bad children of the neighborhood. Listening to all this with judicial-mindedness, the teacher should never in an unguarded moment say unkind things or talk about the bad children, the tart notes, or any other person or thing in such a way as to feed gossip, for it will all come back again, as in the story of the three black crows. A good sentiment to adopt is expressed in these lines: —

"There is enough of good in the worst of us
And enough of bad in the best of us,
That it little becomes any of us
To say unkind things of the rest of us."

QUESTIONS FOR DISCUSSION

1. Draw a plan of the school grounds as you would have them for a one-teacher school and a two-acre lot. Wherein could you improve the plan if the lot contained five acres?
2. Sketch floor plans for a one-teacher schoolhouse. Can the shops and library be so placed as to be watched by the teacher and yet not to make for distraction of the pupils?
3. What the advantages of chairs instead of the usual desks in a rural school? What kinds of chairs?
4. When are wells and springs dangerous as sources of drinking water?
5. In what different ways may a new teacher secure the needed information to guide in making a schedule the first day?
6. What are some good effects of a well-planned first day?
7. What the difficulties of making a schedule of daily recitations? Where place the most difficult studies? Where should penmanship not be placed?

   Make a schedule for each teacher of a four-teacher school of seven or eight elementary grades.
8. What are ways and means of getting the most assistance from pupils in managing and teaching?
9. What are the educative values of play? What the need for supervised play? Discuss right ways and wrong ways of play supervision.
10. What is a junior high school? It may serve what purposes? Where locate one or more in your county?

11. In what different ways may the teacher serve the community? What difficulties in the way of having community programs? How would you overcome these difficulties in your community?
12. What advantages has the school over the church as a community center? The consolidated school over the one-teacher school?
13. Make a list of school programs, one for each month, to be of interest to parents and others and thus to interest them in school.
14. Make a similar list of programs in which other community members as well as school children have leading rôles. Compare lists with other teachers.
15. Make a program, month by month, of things the pupils are to do by way of addition to the plant or of school improvement in other ways, such as building fence, making school chairs, setting trees and shrubbery, etc.

BOOKS FOR TEACHERS

Alderman, L. R. *School Credit for Home Work.* (Houghton Mifflin Company.)

Carney, Mabel. *Country Life and the Country School.* (Row, Peterson & Co.)

Chubb, and others. *Festivals and Plays.* (Charles Scribner's Sons.)

Cubberley, E. P. *Rural Life and Education.* (Houghton Mifflin Company.)

Dresslar, F. B. *School Hygiene.* (The Macmillan Company.)

Dresslar, F. B. *Rural School Houses and Grounds.* Bulletin no. 12, 1914, United States Bureau of Education, Washington.

Field, Jessie. *The Corn Lady.* (A. Flanagan Company, Chicago.)

Johnson, G. E. *Education by Plays and Games.* (Ginn & Co.)

McKeever, W. A. *Farm Boys and Girls.* (The Macmillan Company.)

Wray, Angelina. *Jean Mitchell's School.* (Public School Publication Company.)

United States Bureau of Education, and State Education Department Bulletins on School Buildings and Grounds.

CHAPTER V

GENERAL PRINCIPLES OF TEACHING

I. THE CHILD

I. Periods of Growth and Development

One of the first of modern educational reformers whose influence has reached us was Rousseau (1712–78). He insisted upon what we may term "child individuality." Briefly stated, his doctrine was somewhat as follows: —

Each period of life has its own peculiarities, rights, and needs. Childhood has its place in the order of humanity, and manhood has its place. The child must be treated as a child, and the man as a man. The child must not be forced prematurely into the world of adult concerns.

One of the great problems of education grows out of this doctrine. How can teaching and school work be adapted to characteristics and needs of the varying periods of growth and development? Many studies have been made to discover the nature of these periods. We can give only a brief mention here of some things which may help the teacher. There is always some danger of undue emphasis on differences when periods of life are discussed separately. The growth is really continuous, with no abrupt break between periods. Yet there are critical shifts with peculiar characteristics appearing at different stages, and it is to bring attention to some of these that the customary periods are here discussed.

Infancy and early childhood. This is the home period from birth to about six years of age. At first the child is a little animal, and its growth as such will condition all phases of its after life. Herbert Spencer has said that our first duty

to the child is to make it a strong, healthy animal. The conditions of healthy growth should be of first concern.

In this first stage the senses are active, and the child early responds to suggestion which is manifested in imitation. Children are innately imaginative, and they should have a variety of interests to keep imagination wholesome. An abundance of playthings is therefore necessary. There is a growing desire for new experiences, and this can best be satisfied by opening up to them gradually certain phases of the wide world in which they find themselves. The teacher in rural schools does not have the care of the child during this period, yet through parent-teacher conferences, calling parents together to discuss children's growth and needs, the parents may help one another, and be greatly helped by the teacher.

Childhood. This is the period of the elementary school, covering approximately the ages from six to twelve. During the childhood period boys and girls grow in weight and height at nearly the same rate, the girl keeping slightly smaller than the boy of the same age. At twelve years of age the girl has grown ahead of the boy, but at fifteen the boy passes ahead again.[1] The girl matures more rapidly than the boy, and reaches womanhood a year or two before manhood in the boy of the same age. During the

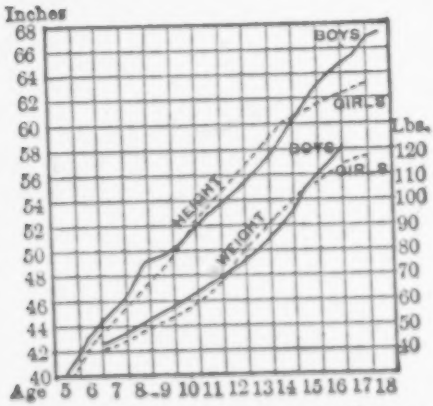

FIG. 9. SHOWING GROWTH IN HEIGHT AND WEIGHT OF AMERICAN CHILD

(From Terman's *The Hygiene of the School Child.*)

[1] See table, "Measurements of American Children," p. 74.

period of the elementary school she will become more precocious than the boy, and this will be more noticeable in early adolescence.

This period is one of growth, and the physical child must still be cared for. Proper food, plenty of fresh air, sunshine, sleep, and exercise outdoors are yet essential. The younger children are more susceptible to wrong conditions than are the older ones of this period; hence the best conditions in housing, seating, warming, ventilating, and exercising should be provided for them. The larger muscles develop first, and the muscles of finer adjustment, such as of hands and fingers, are imperfectly developed at the beginning of this period. Writing should therefore begin with the full, free motion as in blackboard writing and with large copy, since the necessary control of finger movements in writing smaller letters is not yet possible.

Characteristics of this early period. The nervous system is growing and plastic, and this furnishes the great opportunity for forming habits which will be useful — habits of speech, cleanliness, neatness, obedience, respect, etc.

The senses are now alert and keen, and the child is getting foundations in sense knowledge. Observation may be stimulated, guided, made accurate, and the mind stored with abundance of sense material. Nature study has its place here. Imagination is active, and stories do their best work now. Play is also a great factor. Imitation takes a constructive turn, and the child likes to do, to make, and to draw things.

The first school year must not break too abruptly with the preceding life. Confinement in the room and at set tasks must at first be for short periods. Children should learn to read and to write this year, but very little number work should be forced upon them. Stories, nature observation, drawing, handicrafts, and play activities should be given opportunity in the natural development.

Children in this period like to do things for themselves, to excel, and hence emulation of the right sort may be effective as a motive. Also in this period various instincts manifest themselves and may be used to establish many interests. Curiosity, a genuine desire to know, may be used until this desire becomes a permanent interest. Using it in the field of nature study, an interest in natural science may become permanent. In a similar way the story instinct may be built on to establish a history interest and an interest in people in general.

The following paragraph is adapted from the introduction by Dr. G. Stanley Hall in his great book, *Adolescence*:—

The years from about eight to twelve constitute an unique period of human life. The acute stage of teething is passing, the brain has acquired nearly its adult size and weight, health is almost at its best, activity is greater and more varied than ever before or than it ever will be again, and there is peculiar endurance, vitality, and resistance to fatigue. Everything, in short, suggests the culmination of one stage of life as if it thus represented what was once, and for a very protracted and relatively stationary period, the age of maturity in some remote stage of human evolution, when in a warm climate the young of our species shifted for themselves more independently of further parental aid. The child now revels in its tribal, predatory, hunting, fishing, fighting, rowing, playing proclivities. It must not be weaned from but perpetually incited to visit field, forest, hill, the water, flowers, animals, the true homes of childhood in this stage from which modern conditions have kidnapped and transported him. The very soul and body cry out for an active, objective life, and to know nature and man at first hand. These two staples, nature and stories, constitute fundamental education. Reading, writing, drawing, manual training, musical technic, numbers, and many kinds

of skill have now their golden hour. Never again will there be such susceptibility to drill and discipline, such plasticity to habituation, or such ready adjustment to new conditions. But reason, sentiment, and most that pertains to the true kingdom of manhood are only nascent or embryonic. These are to become conspicuous in the next period, adolescence.

Youth, or adolescence. This third period of growth and development is one of transition from childhood to manhood or womanhood. Youth is the familiar name applied to this period, and adolescence to the greater portion of it following puberty. The age of fourteen is often taken as the legal beginning of adolescence, but this is only a convenience. Some girls enter adolescence at eleven, some boys at twelve, and some as late as sixteen. We have noted that the age of twelve marks approximately the culmination of one stage of life. Some children develop more rapidly than others and pass into youth a little earlier. Some linger longer in childhood, bodily and mentally. Some are at times so far behind as to suggest abnormal or arrested development. Yet the majority of children approximate the normal. The ages from twelve to twenty-one may be taken for the period of adolescence.

From twelve to fifteen may be called "early adolescence," a transition stage. These would, in the arrangement now common, be years of the latter part of the elementary school and the beginning of the high school, but in the newer order, often what is termed the "junior high school."

From fifteen to twenty-one would be "later adolescence," the years of senior high school and college.

Adolescent characteristics. In adolescence there are periods of more rapid growth. Boys and girls begin to grow more unlike, the boy in direction of manhood, the girl toward womanhood. There are changes in bones, muscles, vital organs, brain, in fact every organ of the body is more

or less modified. The change has been likened to the metamorphosis of the butterfly. New interests, new sentiments, new views of life appear. Sex manifests itself, and boys and girls begin to assume new attitudes toward one another. Boys organize teams for play, but girls are often here inclined to quit play just when they need it most. Social and religious instincts now unfold. The youth begins to consider more and more the problems of life and vocation. It is the golden age for sentiment and religion. Selfhood and ambition are strengthening, character and personality are shaping, and reason is asserting itself. It is a marvelous new birth which the school has been slow to recognize and to treat as such.

All rapid growth is expensive in consuming energy, and all periods of transition are times of nervous instability. Children may seem mentally sluggish or dull when growing rapidly. There should be caution in pushing studies with such children, and the bodily growth needs assistance. Lungs are expanding and new poisons are appearing to be cast off through blood and lungs. Hence outdoor life and play are still very necessary. Since girls develop more rapidly and peculiarly than boys, there is at first greater dangers threatening their health. But later, about nineteen, the death-rate of the boy is higher than that of the girl, showing that he too has critical stages.

The problem of adaptation. It is not the intention of this book to go far into the high-school period. Adolescence is here introduced to emphasize the problem of adaptation of school to child needs. The beginning of this new life marks the time for changes in attitudes of school work. It is a time for the introduction of new subjects, and probably for transfer to a new school with new surroundings and different teachers. It is rather too much to demand of the teacher in the one-teacher school to cover the six years of childhood

with their special problems, and to enter also this more peculiar field. Here are natural and fundamental reasons for the six-six, or some such new organization of school life. Transportation should begin with this period, if not before, and take children to a central school where equipment, course of study, discipline, men teachers as well as women, and other necessary readjustments all recognize the new life of youth. Not only will the quality of education thus be improved, but children will remain in school longer, another consummation devoutly to be wished.

Chronological and physiological age. In bounding the periods we have had to use often the word "approximately," since the degree of maturity may not correspond to the age in years. A boy at seventeen years may not be more mature than another at fourteen. We measure, grade, and classify, more often by years of age than by maturity. We are just learning that there is often a disparity between the age in years (chronological age) and the real maturity (physiological age). Dr. Crampton has made a study of the beginning and completion of puberty in 3835 boys in New York City.[1] At twelve years of age a very small per cent had passed puberty, sixteen per cent were passing and eighty-one per cent not entering. At thirteen years nearly forty-five per cent had passed or were passing; at fourteen years, nearly seventy-five per cent; at fifteen years, nearly ninety per cent; at sixteen years, nearly ninety-seven per cent; and at seventeen years, one hundred per cent. Since girls mature earlier than boys, we must begin at least with the age of twelve to catch the tide turning toward adolescence.

Dr. Crampton found that boys of approximately the same age in years, thirteen to fourteen, varied in weight as follows: pre-pubescents, 34.9 kilograms; pubescents, 37.7

[1] Terman, L. M. *Hygiene of the School Child*, p. 64, citing Crampton, *American Physical Education Review*, March, 1908.

kilograms; and post-pubescents, 43.9 kilograms. This means that boys of fourteen, for example, are heavy or light as they have or have not reached puberty. The same parallel holds for height and strength. Scholarship, also, correlates with maturity. The same correlation between weight, height, strength, scholarship, and maturity holds for girls, but girls mature more rapidly than boys.

Dr. Crampton's data may throw light on some things. Boys drop out of school more rapidly than girls; girls of a given chronological age usually make better school marks than boys of the same age; many pupils break down in trying to keep up with others of the same chronological age; trying to force all children along according to chronological age rather than real maturity brings about a high percentage of failures of promotion; differences are most noticeable in the period of early adolescence.

Individual differences. It would seem that from the beginning of early adolescence there should be as much individual instruction as possible, and education of girls should differentiate somewhat from that of boys. In the early high-school years there will now be found boys of all three stages of maturity, pre-pubescent, pubescent, and post-pubescent, and similarly girls who are nearly two years ahead of the boys in maturity, yet all in the same classes. These observations again place emphasis on the need of a separate school beginning about the age of twelve.

Differences in maturity will begin to show in the elementary school. Teachers should study children to determine the physiological ages. Variation in weight and height from the average for the chronological age may raise the question of maturity, and if this variation is accompanied by backwardness or forwardness in learning, the individual case should be carefully observed and treated accordingly. Growth must have fair opportunity to do its work, and back-

ward children must not always be put down as merely lazy, dull, or indifferent. In this matter of growth, the race is not always to the swift. The slow ones often come out good and strong.

Slow and defective growth may be due to various causes, some of which are heredity, malnutrition, insufficient sleep, inadequate clothing, child labor, lack of play opportunity, and disease. Child labor and poverty have a marked effect in stunting growth. Bad teeth affecting digestion, adenoids or other obstructions in nose or throat affecting breathing, and the hookworm disease so prevalent in the South are causes of defective growth which may be located and removed. The teacher should get a fairly good physical record of each child, as referred to in other places in this book, and carefully study the same. Note especially the physical records of backward children. Make such allowance for variation from the normal as might be indicated by heredity, racial and family. That is, in some families children may average low in weight and height and be normal in maturity. In other families children will average high. After family variations are allowed for, careful scrutiny should be made for other causes in the case of backward children.

Average weight and height. The following table of average weight and height is given for comparison with the weight and height of children in any school. Much variation from these measurements may suggest a variation in maturity, and school work should be regulated in accordance with the best judgment of the teacher after careful consideration of the records.

The teacher should get the height and weight of all children between six and seven and compare with measurements opposite 6.5; between seven and eight to compare with opposites of 7.5; and so on for the whole school.

MEASUREMENTS OF AMERICAN CHILDREN ACCORDING TO THEIR AGE IN YEARS, SHOWING WEIGHT IN POUNDS AND HEIGHT IN INCHES

Age	*Weight*		*Height*	
	Boys	*Girls*	*Boys*	*Girls*
6.5	45.2	43.4	43.9	43.3
7.5	49.5	47.7	46.0	45.7
8.5	54.5	52.5	48.8	47.7
9.5	59.6	57.4	50.0	49.7
10.5	65.4	62.9	51.9	51.7
11.5	70.7	69.5	53.6	53.8
12.5	76.9	78.7	55.4	56.1
13.5	84.8	88.7	57.5	58.5
14.5	95.2	98.3	60.0	60.4
15.5	107.4	106.7	62.9	61.6
16.5	121.0	112.3	64.9	62.2

Average height calculated, by Dr. Franz Boaz, from measurements of 45,151 boys and 43,298 girls in the cities of Boston, St. Louis, Milwaukee, Worcester, Toronto, and Oakland. Average weight calculated, by M. de Perrot, from data on about 68,000 children in the cities of Boston, St. Louis and Milwaukee.

II. THE CHILD'S ORIGINAL CAPITAL

Education must work with nature rather than against it. Education will be more effective and more economical in proportion as it utilizes the native tendencies wherever these are good. In "ye old-time school" the natural tendency to physical activity was suppressed for long hours of confinement; and if a child was caught drawing a picture on his slate, his ears were boxed for his yielding to his expressive and artistic cravings. Enjoyment was condemned, sense knowledge little used, and the child at once put at work with the dryest of abstract symbols and operations. All this did violence to the original nature of the child. The modern school attempts to connect up with the native

tendencies and interests of the child, for out of these are the issues of life. What are some of these?

Instincts and general innate tendencies. "Instincts are definite, complex forms of inherited response to definite stimuli." (Pyle.)

"Instinct is the faculty of acting in such a way as to produce certain ends, without foresight of the ends, and without previous education in the performance." (James.)

Biologists, psychologists, and sociologists are not yet agreed on a definition of instinct. The above definitions are given by way of illustration. All are agreed that instincts are inborn tendencies to more or less definite modes of action, unusually adaptive in their nature and common to a whole species. If the statement stops at this, it will include more than some are willing to include. There are simple reflex actions, such as winking, crying, coughing, sneezing, vomiting. There are reflexes a little more complicated, such as sucking, clasping, carrying to the mouth, shaking the head, sitting up.

The responses become more of a complex of reflexes in acquisitive, constructive, fearing, collecting, and migratory tendencies, and in flight, pugnacity, and parental instincts.

General innate tendencies which unify a great variety of acts, hence become still more complex, are play, curiosity, imitation, emulation, and sociability.

The definition of James includes as instinctive all the above-mentioned human tendencies. Others, limiting instincts to complex responses, would exclude the simple reflex acts, and insist that the general innate tendencies involve a compound of instincts, and that play, imitation, etc., should not be classed as instincts.

Excluding the simple reflexes, it makes little difference here whether we class general innate tendencies as instincts

or refuse to do so. For simplicity we are inclined to call instinctive all those activities that an animal can perform without having to learn how. The pedagogy of the instincts and of the general innate tendencies is the same. The basis of all these is in the inherited nervous system. This heritage furnishes the strongest forces of human nature, and it is the child's original capital for life. These instinctive and innate tendencies can be directed and formed into habit. Habit is a tendency acquired and made definite, not inborn as instinct. Instincts not used may weaken and nearly disappear. Human instincts when used combine with intelligence and may thus become masked, so that some people are inclined to think that man is weak in instincts. James insists that man has a greater number of instincts than any other animal.

The development of instincts. Some peculiarities of instinct should be noted by teachers: —

Some instincts are full-fledged when the child is born. Other instincts mature at later times as the nervous system matures. In the baby fish practically all instincts are mature, and the little fish needs no education. The child is born immature, and it requires a long period of time for growth and adaptation. Education becomes a necessity. As children's instincts mature, there is a manifested disposition to the behavior prompted by the respective instincts. We speak of these dispositions as children's interests. These tell us when to use instinctive tendencies to fix for good habits. "We should strike while the iron is hot." The constructive or making tendency should be used in manual training. This will assist to maturity, and develop interest, skill, and originality in constructive work.

Play is nature's method of developing the child. Botn body and mind are called into action in a stimulating way. Rob a child of play and you rob it of the best traits of life.

Such a child will be undeveloped, one-sided in nature, and, as a rule, anti-social and not an agreeable companion in later life.

Curiosity, the child's great desire to find out, may be stimulated and guided so as to establish permanent interests in many fields of science, history, people, and all good. Little by little most of us drop our imperfect interests of this sort until we have desires to know about only a few things in the world, our lives have narrowed down to petty interests, and learning most things has become a bore. At the proper time the child is interested in learning anything and everything. Natural curiosity should be kept strong through proper exercise.

The migratory instinct may be directed into nature study and geographic explorations, and the collecting instinct guided into channels of natural history and geography.

The gregarious, or gang, instinct may be turned to advantage through organized games and clubs. The boys' and girls' club movements in agriculture and rural life should be utilized. Literary or debating clubs may be stimulated. Musical, artistic, and dramatic organizations come in here. The gang tendency should not be left alone to run into gossipy, predatory, or other undesirable gangs.

Individual variations. Another peculiarity for the teacher to reckon with is the tendency of instincts to vary in different individuals, according to heredity, so as to give a lack of balance. Pugnacity may be strong in some, and shyness or timidity in others. Gregariousness may be strong, or a tendency to shun others may appear.

An attempt should be made to restore a balance in instinctive tendencies. The timid and shy should be encouraged, the fighting ones told stories of kindness and of sympathy. Self-respect should be stressed with those of excessive humility, and politeness and respect for others stressed with the

overforward. Courage should be instilled in the fearful, caution in the headlong.

Thus not all native tendencies are good. Some must be strengthened, others checkmated by an opposite. The balanced life is a rare achievement but a worthy ideal.

Good teaching should stimulate and give direction to proper native tendencies. Use strengthens these, fixes them into habits, and builds up correlated interests. Neglect of opportunity for use causes instincts to weaken. Substitution of opportunity in the direction of desirable instincts for undesirable tendencies is the best method of displacing the undesirable.

Instincts and interests are so closely connected that one leads naturally into the other.

III. Interests

Immediately out of the theory of instincts comes the doctrine of interest. "The craving for exercise of a rapidly growing brain center manifests itself as an interest." (Tyler.)

Forcing, and arrested development. Interests are thus connected up with activities of the brain centers. The craving, or feeling, which prompts an interest is at first instinctive and dependent upon a maturing brain center. It follows that until the interest appears, that part of the brain is not sufficiently mature to profit by exercise, hence there is such a thing as forcing the child prematurely, and not only an aversion formed but brain growth hindered, so that "arrested development" may result. We should not crowd back higher studies into lower grades without reckoning with the maturity of the children. Children must grow through children's ways before they reach adult ways. Nature has had more experience and has raised more children than have we, and we should not thwart unwisely.

Herbart (1776–1841) was the first to give us a doctrine of interest, and his influence in this and other theories has gone far to create a science of teaching. He classifies interests into two main groups, each with three subordinate classes.

Interests awakened by nature. The first main group consists of interests awakened by nature apart from man, the realm of the natural sciences.

The subdivisions under this are: —

The empirical, which includes the general attractiveness of things in nature, the variety, the novelty, and the changing moods. This is mere sightseeing interest.

The Speculative, which goes deeper than the empirical, seeking connections, causes, origins, laws, and such explanations in nature. This leads to the fundamentals of the natural sciences. Why can a squirrel come down a tree in a way a cat cannot? How can a fish breathe in water? A child has native interests in all such.

The æsthetic, which includes the beautiful in nature and art.

Interests centering in man. The second main group of interests centers in man, his ways, history, literature, and the social sciences.

The subdivisions are: —

The sympathetic, which concerns itself with individuals, their successes and failures, joys and sorrows, loves and hates. This is the field of romance and biography. King Arthur, Ivanhoe, Robin Hood, Columbus, Washington, and others are centers of great stories because of the personal interest.

The social, involving the fortunes of nations, states, societies, peoples, their liberty or slavery, progress or stagnation. Fraternities, clubs, and social societies or organizations are built on social interests.

The religious, which embraces our interests in the future

world, God, the Creator and ruler over all, and all that is considered under spiritual interests of man.

Under this showing it was insisted that interest is many-sided, that all these six classes should be developed, and that school studies and materials should be selected for this purpose.

In this classification Herbart rather overlooked the group of interests in motor activities, in constructing, inventing, and self-expression through material forms. In basing a course of study on his outline, these motor activities, as well as the formal, mechanical studies, such as spelling, arithmetical operations, mechanics of reading, must be added.

Dr. Dewey's classification. Dr. John Dewey, of Columbia University, in *The School and Society*, makes a fourfold classification of the earliest interests of children which is of value to the school. He says, "Now, keeping in mind these fourfold interests, — the interest in conversation or communication, in inquiry or finding out things, in making things or construction, and in artistic expression, — we may say they are the natural resources, the uninvested capital, upon the exercise of which depends the active growth of the child."

There is thus a tendency, supported by all modern child study, to give first place to the native, instinctive interests of childhood, and from these to proceed with school work to include the best which history, literature, and science can supply, also typical modern industries and social life. In this latter Dr. Dewey is superior to Herbart.

It appears in this discussion that interests may be native and acquired. How interests are developed is a matter of importance.

How to develop interest. Native interests have been styled direct interests, and interests derived through association called indirect or derived interests. In the many lines of native interests suggested may be found centers of

interest around which to organize the many school studies. Mother Goose, Robinson Crusoe, Aladdin, Hiawatha, and Robin Hood appeal directly. If nearly all of the child's reading matter could be selected so as to appeal to his instinctive interests he would with pleasure overcome the difficulties of learning. Let the arithmetical problems group around school activities related to the community. If through stories, centers of interest are built up, history may be given an enduring interest. Nature study gives the natural approach to physical features in geography, to agriculture, and all natural sciences. Interest in people, travel, and supplies of food and clothing furnishes the approach to other phases of geography.

Interest and drill. Interest, however, though it inspires vigor of thought and deepens all impressions, can never dispense with drill for habituation. In spelling, in arithmetical tables and processes, in language forms, letter forms, and punctuation, and in other mechanics of learning there must be patient drill to fix the desirable possessions and render facile their use. The doctrine of interest, wisely applied, will mitigate the terrors of drill many fold, though it cannot entirely remove the necessity for repetition to fix habit. The main point must not be lost to sight, which is, that many-sided interests are developed and strengthened for culture, character, life. Thus interest is involved both as means and as an end in teaching. As a means, interest promotes all learning, stimulates mental vigor, vigor of thought, of memory, and of attention, and achieves the best results in any branch of study or any valuable activity. This means that interest is a motive power used to arrive at certain desired ends. As an end, the teacher must seek to build up permanent life interests, to crowd out undesirable interests, and thus, whether native or acquired, these interests are to become valuable possessions.

IV. Apperception

Definition and Illustrations. From Herbart the term "apperception" has come into wide use, as applied to a phase of association of ideas, so as to give a very fruitful emphasis to this for teachers. We acquire a number of ideas through experience, and every new idea coming in is at first associated with some old idea already in experience.

Apperception has been defined as the process of acquiring new ideas by the aid of old ideas already in the mind, to which the new is likened or with which the new is associated. This was rather the idea in older psychology of association to aid the memory, but the new idea stressed by apperception is that it also aids in interpretation of the new. Halleck illustrates this with the story of the three men passing a tree. One comments on it as such a fine tree for lumber, another is impressed with the quantity of bark, and the third with it as likely to contain squirrels. The first was a carpenter, the second a tanner, and the third a hunter. The tree was the same in light, shade, etc., for all to see, but it made a different impression on each because of ideas prominent and active in mind.

The Indians called the ships of Columbus "white-winged birds," and they named the white man's whiskey "fire-water." The writer was sitting in a train on a seat with another man traveling in West Texas. A large jack-rabbit startled by the train went running out into the prairie. Seeing it the man rather excitedly exclaimed, "Look, look, at that narrow-gauge mule." You may guess that he was a railroad man, for who else would have interpreted the object as narrow-gauge?

A young teacher in a normal school was teaching a lesson about Indians to a first-year class in the practice school. She was going to teach the idea of the peace pipe. She began

by telling them something of Indians making clay pipes to smoke, and asked the children how many had seen clay pipes. Several hands went up, and one boy said that there was one at his house which he could get. As he lived a few doors away, he was permitted to go after the pipe, and in a few minutes triumphantly returned with a joint of three-inch sewer pipe. It was a clay pipe, and he interpreted according to his idea of clay pipes.

The use of the familiar in learning the new is a natural tendency or drift of the mind, and this way of taking in the new is the process of apperception. This way of looking at the process of learning gives the teacher quite a useful cue.

Our ideas through the law of association seem to group themselves into kindred groups. The more familiar these groups, the more active are they in the process of taking in the new. And the group which arises in mind when the new is presented, has been called by Herbart "apperceiving mass." The person with the greatest number and variety of possible apperceiving masses will be the quickest learner. A man with only a few such centers must interpret every new thing in a limited way, hence he is rightly called narrow-minded.

Some applications for teachers. The following applications to the work of teaching are pertinent: —

(1) In teaching the new the teacher must rely upon ideas in the minds of the children. If she is going to depend upon certain things in their minds, she must make sure these are there. They should be called forward, and made familiar. This means that we must know children better, especially the contents of their minds. We cannot dispense with ideas gained by children at home, in play, in previous grades, or in any other way. We must encourage the acquisition of a full store of material while the children are in the perceptional and curiosity period of early years, for this will insure a rich variety of apperceiving material.

Dr. G. Stanley Hall has written a small pamphlet of suggestive value to teachers based on studies of "The Contents of Children's Minds on Entering School."

(2) Our new knowledge has its effect on the old, often illuminating, extending, making clearer. Proper association should be set up for this purpose, and the new firmly welded to the old.

(3) This same process of connecting up the new with the old and familiar is but another phase of the doctrine of acquired interest. When there is apperception there is interest. The first headway is secured through instinctive interests, and then through proper associations, acquired interests are multiplied and extended. Apperception is the key to acquired interests.

(4) This doctrine of the use of the familiar emphasizes the principle of beginning geography with home and school surroundings, history with local stories, reading with familiar words and stories of instinctive interest, nature study with near-by material, and connecting up school education with community life.

QUESTIONS FOR DISCUSSION

1. Find more about Rousseau's doctrine of the child.
2. Why do girls at twelve to fifteen seem to be better students than boys of similar age?
3. What are reasons for much individual teaching? What some values of class teaching?
4. What are the relations of the instincts to teaching?
5. What use can be made of the collecting interest in teaching geography? Nature study? Of the ownership interest in teaching agriculture?
6. Curiosity is strong in children. Why do we grow indifferent to so many things in later life?
7. What difference between the doctrine of interest and merely interesting the children when reciting?
8. How would you treat an already started interest in reading trashy stories?
9. Recall cases of unique apperception of some children.
10. Find out more about Herbart.

BOOKS FOR TEACHERS

Dewey, John. *School and Society.* (University Chicago Press.)

Kirkpatrick, E. A. *Fundamentals of Child Study.* (The Macmillan Company.)

Excellent treatment of instincts.

McMurry, Chas. *General Method.* (The Macmillan Company.)

Treats interest and apperception.

Rooper, T. G. *Apperception, or a Pot of Green Feathers.* (C. W. Bardeen.)

A very interesting story.

Tanner, Amy E. *The Child.* (Rand, McNally Co.)

A good beginner's manual.

Terman, I. M. *Hygiene of the School Child.* (Houghton Mifflin Company.)

Tyler, J. M. *Growth and Education.* (Houghton Mifflin Company.)

For periods of growth.

CHAPTER VI

GENERAL PRINCIPLES OF TEACHING

II. THE RECITATION

Lessons and recitations. There is some confusion in the use of the terms, "recitation" and "lesson," these often being used to mean the same; as, when we speak of the "method of the recitation" and "lesson plans." The latter might be called recitation plans. When we use recitation to mean the activities of children during a class period, we use it in a sense different from the use of lesson in saying to children, "study your lesson." According to popular usage in America we assign lessons, and we call pupils for a recitation of lessons. This makes the lesson the subject-matter for the recitation.

Customarily, where one teacher has several grades or classes, each class has stated times for coming forward to special benches, convenient to the teacher and the blackboards. Here the teacher engages the pupils of this class in recitation. In this exercise the teacher and pupils come in close mental contact, in which pupils are guided, stimulated, tested, and exercised in expression, habit-formation, thinking, and application of things learned. Too often this exercise is held to a narrow purpose, chiefly for testing.

How to handle recitations in rural schools. In rural schools the classes are so many for each teacher that the time given to each class for customary recitation is too short. Much of the work done at the desks should be treated as class exercises, wherein the pupils are guided, tested, stimulated, and exercised variously by the teacher. On some days, instead of calling the whole class forward, the teacher may

use the time in passing from pupil to pupil, inspecting work, passing criticism, assisting with difficulties, assigning additional work, and thus teaching in the full sense of the word. This will be an advantage, for the customary recitation is too often mechanical in its attempt to teach in mass, the time of many is wasted in explanations for a few, and the individual sacrificed.

The demand is increasing for more individual teaching. Formerly there was much more of it in rural schools, every pupil working along by himself. Individual teaching, greatly enriched, may profitably be restored as an adjunct to class teaching. Pupils may be kept working individually under guidance, and kept fairly well together in classes. After a day's individual exercise at desks, pupils of a class may be called forward for the typical recitation together, and every member of the class will be better prepared to enter into such a recitation with greater understanding and profit. There will be more of spirit in such a recitation, since pupils will feel prepared and at ease to think and to respond. Bright pupils may be given additional work to do at desks, yet all kept in the field of the same lesson. Advanced pupils may be utilized in helping the primary ones, thus freeing the teacher to give more time to pupils needing special attention. The additional work or the assistance rendered in teaching will be valuable in itself for the brighter pupils who might be kept marking time. There is an old Latin proverb which says, "Man, by teaching, learns."

Varieties of recitation work. This much of method has been used by way of preliminary to suggest that there are varieties of class exercises. These have generally been named in accordance with the aim or purpose of each. Betts in *The Recitation*, an excellent small manual, classifies these purposes under three heads, *testing*, *teaching*, *drilling*. The class period may be taken up for any one of these purposes,

or all three may be used in the one period. Strayer in *The Teaching Process*, a fuller and an excellent book, discusses seven varieties which he calls lessons: 1. The Drill Lesson. 2. The Inductive Lesson. 3. The Deductive Lesson. 4. Lesson for Appreciation. 5. The Study Lesson. 6. The Review Lesson. 7. The Recitation Lesson. This limits the term, recitation, to the seventh type, which is for the purpose of telling what is in the book, testing for facts to be learned, and for orderly presentation of such facts or textbook material. This holds the term somewhat to the root meaning of the word "re-cite," to say again or to say back. However, in America, we have come to use it in a broader sense, and the other varieties have ordinarily been called recitations, unless exception be noted in the case of the study lesson, which, as we have shown, may be used for individual recitation preceding a general recitation. Many times a part or all of a regular period with the whole class should be taken up with the assignment of the next lesson, including questions and suggestions as to how to study it. Thus any one or more of these seven varieties may be used in the same class period. It is important for the teacher to keep in mind just which purpose is uppermost at any time, the questions and methods being somewhat determined by the end sought.

The inductive-deductive aim. A few words of explanation of induction and of deduction may be needed.

1. Induction. A little child sees about the house the animal which he later learns to call a dog. At first he has but a concrete, individual notion, and his name for it may be Rover. The next dog he sees he is likely to call Rover. After seeing several dogs and learning the individual names, he gets the notion, dog, as a general notion to apply to a class or group. Through his senses he acquires many individual notions, and little by little he builds up from these his general, or class notions, general truths, principles, and laws.

This process of learning is inductive. The movement is from particulars, individuals, concretes to generals and abstracts.

2. Deduction. After general notions have been obtained, these are in turn used in interpreting individual cases which arise. A rule of arithmetic may be applied to a number of examples coming under it. A miscellaneous lot of examples may be given, the fitting rule to be selected and applied. Starting with definitions, rules, and general statements, and proceeding to particulars which may come under these, is proceeding deductively. In much of our past teaching of arithmetic, definitions and rules were first learned, then examples worked out under these, little or no attempt being made to develop the rules. The multiplication table was memorized and, through application, made useful. In the study of language, definitions and rules of grammar were studied and applied in parsing, analysis, and correction of false syntax. Geography was pursued through definitions and map study. This was mostly deductive procedure, and such is teaching and learning through textbooks solely.

Influence of Pestalozzi and Herbart. It was the influence of Pestalozzi which first brought a change in this procedure, and insisted that at first the child must naturally learn inductively. Language lessons preceding grammar, number work with objects and concrete measures, and local studies in geography and history, are some results of Pestalozzian reforms which reached this country through Horace Mann and David Page.

It must be clear to a thoughtful mind that general truths and the great body of the world's knowledge were derived from particular observations and experiences, but when a general truth has once been established it becomes a most useful tool of thought. This historical procedure indicates the proper order for the child, and the circle of thought is not complete without both induction and deduction. It was

109

Herbart who formulated a scientific teaching-method based on this idea.

The steps of a recitation. This is generally presented as the formal steps of the recitation.

Step 1. Preparation. This grows out of his doctrine of apperception. The mind associates the new with related experiences already familiar. That this connection between the old and the new may be readily made, the ideas already in mind should be called up and be ready for service. Previous knowledge must be recalled if it is to be used in learning the lesson. The pupils must be brought to the proper emotional attitude towards the new lesson, and this may be done through making them conscious of the aim or problem in the lesson. This step of preparation will often coincide with the assignment of the next lesson. It may occupy a very short time, and it may take most of a period. If pupils are to master a new lesson, they should know the nature of the problem involved, and there should be sure and clear possession of the former knowledge needed in the mastery.

A teacher should not send pupils to a new task without making sure the preparation. In rural schools, where but little time is spent in ordinary recitation and much time spent in study at the desk, the step of preparation is one to be carefully thought of by the teacher, so that pupils may really be ready and able to do the work. It is sometimes well to have a study period in a subject to follow immediately the recitation period where preparation was made, so that pupils may work with apperceiving matter fresh in mind.

Step 2. Presentation. This step in inductive teaching puts before the class a number of concrete, individual cases, so as to make clear the rule, definition, or general idea to be learned. Suppose the lesson to be learned is the method of adding fractions.

Step 1. How many are 3 pigs + 5 pigs + 2 pigs?
Step 2. How many are 3 eights + 5 eights + 2 eights?
How many are 2 fourths + 7 fourths + 3 fourths?
How many are 1 third + 2 thirds + 1 third?
Who can write this last one some other way?
What will the sum be now?
Rewrite the other examples.

Step 3. Comparison. In this step the pupils are led to note wherein the individual cases are alike so as to observe the general idea. In this particular case, they should be led to see that in every example the numerators were added but the common denominator kept.

Step 4. Generalization. This step calls for a summary or statement of the general idea. In the particular problem solving, this would be a statement of the rule for adding fractions of this kind.

Step 5. Application. A number of further examples should be given for practice in applying this rule. This fifth step is deductive, since it proceeds from the generalization to particular examples coming under it. Steps 2, 3, and 4 are inductive, since they proceed from particular cases to the generalization. The fifth step is needed to test and to fix through use, hence the complete recitation unit here would be inductive-deductive.

The next problem to raise in the minds of the pupils in the above connection would be, "Suppose the fractions are not alike, what can we do then?" This problem will call for the five steps over again in its treatment.

Applications of the process to school work. These steps may be followed in teaching many lessons in any of the fundamental school subjects. In geography the work of water and of weather, for instance, should be noted in concrete cases. The formation of streams, stream systems, islands, capes, ponds, etc., may be illustrated in local geography

before these are studied in generalized maps or as defined in the book. A few typical cities and river systems should be studied in detail. Children may help to gather facts about these from geographical readers and other sources. Other cities and river systems may be briefly compared with the ones studied.

In language and grammar, particular expressions may be selected to present the use of the pronoun for noun; others may be selected to illustrate that the verb may express present time, past time, future time. These concrete cases should precede the generalizations found in definitions and rules; then, of course, other sentences given for the application to test and to fix.

The critical part in this type of recitation will be the selection of such illustrations or examples as will make clear the general idea. The illustrations should be sufficient for the necessary comparison. The old saying, "one swallow does not make a summer," is to emphasize that it is not good to generalize from one case. On the other hand, the selections should consider economy of time, more especially so for a very short recitation period.

A new topic may be treated by the teacher with the whole class through the first four steps, then individual work assigned for application. But in some lessons in history, morals, and literature the application must come in later life.

Limitations of the process. The plan of the five steps is one often to be used in teaching something new. However, not every topic lends itself to this treatment, and the different steps will vary, as already indicated, in different branches. The teacher should not tell too much, should lead the children to make their own comparisons, and should secure from them their own wording of the rule definition, or principle developed. After a while the better formulation in the book may be substituted. Though not every topic

can be so developed, and the teacher must tell many things, yet it is largely true that inductive teaching is not attempted by rural teachers in anything like its due proportion.

The testing aim. In ungraded rural schools less time can be had for the recitation period, hence more dependence must be put on books and other helps. The testing, or reciting aim has thus come to be used more than it deserves, yet it must have a prominent place. The use of books is one of the things to be learned. Reading and analyzing the thought of the book is an excellent training in one kind of necessary thinking. There should be testing for facts in the lesson, and training in the orderly presentation of these when called on to recite. The teacher may, as the quiz proceeds, put on the blackboard an orderly topical outline of the lesson, and later, pupils should make their own outlines. In this way they are learning to think and to study logically.

But in executing this aim, the recitation becomes rather lifeless if it is purely one of repeating what is in the book. The pupils should be held in strict account for what has been assigned, yet the teacher should supplement from a fund of information all around and about the lesson, and thus enrich the textbook, which is generally brief. Pupils may be told where to look up additional matter and bring this in. Sometimes topics should be assigned individually, and each pupil requested to report on his topic, the whole class to profit by these reports. Pupils and teacher should question the one reporting and thus test the fullness and accuracy of the preparation. In history, geography, civics, word study, nature study, and agriculture reports may be used. Both care and time must be given to the assignment of such lessons. Supplementary books and an encyclopedia will be of invaluable service, as will some good magazines. It should be kept in mind that one school aim should be preparation for practical needs of life in the use of books,

magazines, and out-of-door material. The testing aim combines with others and becomes a teaching aim as well.

The drilling aim. In the discussion of interest it was pointed out that no use of the doctrine of interest would ever make drill unnecessary. For facility in the use of arithmetical combinations and rules, for spelling and writing with ease and accuracy, for reading with ease and good voice, for knowing the leading historical dates to hang things together, for correct letter forms, and for punctuation, drill is necessary. The proper ideal should be placed before the pupil, then repeated practice will form the habit. Repetition is the chief method of drill, and for the above results, repetition must be resorted to faithfully. Words must be repeated in different lessons of the primer, blackboard, and chart until recognition at sight is secured. Much drill in arithmetical tables is required. The modern school is charged by many with the great sin of failure to turn out good spellers. We have not space here to argue whether this charge is rightfully or wrongfully made. Nevertheless, there should be wise drill in spelling, language forms, letter forms, and many other things. All of this will be considered more at length in Part II.

But repetition should not be blind, that is, lacking purpose or attention. A boy may go over and over words to be learned, but if his attention is on something else, it profiteth nothing. He should be brought to appreciate the object of the drill. Then it is worse than waste to drill where drill is not necessary. Pick out the stumbling blocks, misspelled words, grammatical errors, difficult arithmetical combinations, — such as the tables of 7's and of 9's, — and drill on these. Drill to break up carelessness, and to form accuracy of habits wherever needed. Habit makes skill possible, and habit is formed through doing again and again until the act becomes second nature.

The reviewing aim. Review may be to help to fix, as in drill. It should also be for organization of knowledge into larger wholes, thus better relating the parts to each other. At first the lessons take up a large subject by piecemeal, but in reviewing, the lesson may cover larger parts of the subject, and the relations throughout may become much clearer. Through connections set up between several lessons, through new examples and applications, and through summaries, new views may be given in reviews. Reviews should be frequent and interesting, reaching back as the class proceeds further forward.

Written reviews are essential in furnishing opportunity for pupils to summarize and to state briefly and clearly the central truths as they see these. Examinations furnish stimuli for reviews of other kinds which are necessary to the organization of knowledge. Examinations should not count so much in promoting as has been the case in many schools, yet, rightfully used, examinations, oral and written, may be made genuinely helpful to pupils in learning. Consider them merely helpful reviews, and even young children will want to play at taking them when they begin to write sufficiently. Great care should be exercised not to make bugbears of examinations; rather have them considered useful reviews.

The appreciation aim. This aim is uppermost when the æsthetic nature is to be developed. It has to do with the appreciation of the beautiful in nature, pictures, sculpture, architecture, and literature. In nature there should be developed an appreciation of the various types of beauty in flower, field, forest, bird and other animal worlds, landscape, sky, and all out-of-doors; also an appreciation of the wonderful creations with marvelous adaptations, suggesting the greatness of the Creator. In literature the beauty of expression, the choice language, the figures of speech, the harmony of plot, and other æsthetic qualities should be brought

to appreciation; also the human element, the conduct of the characters, their thoughts and emotions are factors in the work for appreciation. The bad should be condemned, the good approved, as the children think again the thoughts of the masters. In story and history this human element must secure appreciation. This will be done if there is sufficient detail to make the story or the history graphic, so as to appeal to the active imagination.

In art, pictures will furnish the chief source of material for appreciation. Even small pictures, such as the Perry Pictures, may be used to advantage, and each year one or two larger pictures may be added to the school walls. These should not accumulate until too many are on the walls. A few choice ones will make a true artistic effect. When new ones are added, some may be taken down for a few years, thus giving variety with taste. Probably a system of exchange may be worked up with other schools. At times these wall pictures should be subjects of lessons for appreciation. Sometime it may be well to talk with the whole school about a new picture, so that the pupils may be brought really to live with that picture in daily admiration and enjoyment.

The appreciation aim thus enters into work in story, reading, literature, history, art, and nature study. Wherever opportunity offers, this aim should become prominent.

How to Study Pictures, by W. S. Emery (Prang Educational Company), is excellent for teachers.

The Art-Literature Readers, published by Atkinson, Mentzer & Co., Chicago, will be very helpful, if this series can be had for supplementary or even library use.

The study aim. This has in view the teaching how to study. These aims overlap at times, as has been seen in testing, drilling, and reviewing; also a part of the discussion under testing belongs under the study aim.

Many pupils pass through and out of our schools and

never learn to study. This aim has been neglected in nearly all schools. Pupils gather from common practice that studying is merely committing to memory. It should be much more than that. It should include, at least, finding out the thought and purpose of the lesson, and an intelligent comment on the same. The best ways of logical thinking should be pointed out and habits formed in such thinking. Early use of the topical method, even with children's stories, will be a beginning. Topical outlines and reviews will aid in developing a logical memory, rather than a rote or verbal memory. Pupils who would memorize and recite word for word should be trained to make topical outlines, and should be made to skip about from topic to topic, frequently reviewing in this way. Assignments for reports come in here. There should be special lessons covering the use of the dictionary, encyclopedia, atlas, and library in general. Sometimes topics for investigation should be given out for pupils to find their own sources of information, and report back with exact references well listed. Thoroughness or fullness of topical discussion should be insisted upon, in accordance with the maturity of the child.

The pupils' methods of study should be watched by the teacher when inspecting work at desks. Proper methods and habits of study should be aimed at, from the very first, when desk work is assigned. The teacher should aid pupils with some difficulties, yet caution should be exercised not to help overmuch. Self-reliance must be developed, and ambition to overcome difficulties encouraged, yet pupils must not be left to waste time over difficulties too great, nor be allowed to struggle on to the point of discouragement. Sometimes a mere hint as to the next step, or a word of encouragement will be all that is necessary. Supervision of desk work is of greatest importance, and both firmness and sympathy are needed in its exercise.

Desk work. The chief object of desk work is to keep all children at work on the fundamental lessons of the school. It should be more than "Busy Work," merely to keep children busy. It may have aims as follows: —

(1) An extension of lessons already learned or recited, to make clearer or broader, or to stimulate further expression through drawing, writing, making, or doing.

(2) Drill in lessons recently recited or presented.

(3) To awaken apperceptive material, to prepare for something new to follow.

(4) To develop habits of study, for best use of textbooks.

(5) To work up an assigned lesson for report or recitation.

Thus desk work should be real school work connected with the regular course. In upper grades much desk work can be based on text and reference books, hence less exacting on the teacher. But even here the need is for better instruction in the use of books, clearer assignments so that pupils may develop logical habits of study, and closer supervision for individual instruction of pupils who have short recitation periods in class.

In the lower grades the problem of materials is one which will cause the good teacher much time, labor, and thought. But as the months go by the materials will accumulate, and some may be used with different groups at different times of the year. Some form of duplicator, or mimeograph, a supply of manilla paper, and other things already mentioned are necessities.

The desk work should be interesting and should not involve too much writing; in the first two grades very little writing. Drawing, color work, simple compositions with illustrative drawings or pictures pasted in, handicrafts, number exercises with objects, slips of paper with words and sentences, are familiar types of primary desk work. If the desk work materials are well selected and smoothly

handled, the directions clear and ample, the work of supervising and correcting will be made easier. But the oversight and correction must be done, or pupils will grow idle and slovenly. The teacher must take time for it, and here again the advanced pupils may be used to assist with primary ones.

Suggestions for primary-grade desk work. Following are some suggestions for the primary grades: —

(*1*) *Cigar boxes for supplies.* These are light and of convenient size for individual boxes. There should be a box for each child in the first and the second grades. In these boxes may be kept envelopes with desk work in reading, number, etc., pencils, pens, color box and brushes, scissors, other instruments for manual work, and other materials for number work, such as grains of corn, pegs, sticks, imitation money, etc. Each child should have a twelve-inch rule. A compass also will be quite useful. Each box should have its owner's name pasted on it, and there should be a definite place for each box. If there are no shelves or cases for this purpose, a place may be arranged near the teacher's desk. Later, the boys, in manual training, may make such. The boxes should be distributed in the morning and taken up before dismissal. Monitors may be appointed to do this, and each child should be held responsible for the care of the box during the day and for careful arrangement before evening collection.

(*2*) *Envelopes.* The teacher can get a quantity of envelopes at little cost by the hundred. Cards just large enough to go in the envelope will be convenient for directions and devices for desk work. These cards, with written or printed directions thereon, and pieces of manilla or oak-tag paper with words, sentences, drawings, number devices, etc., may be put in envelopes from day to day for distribution to the children that day. There will be envelopes for reading, for

number work, for language, and for handicrafts. Drawing will be correlated with these, as will writing at first, but separate writing slips may be used the second year.

(*3*) *Charts.* Large sheets of manilla paper may be used for charts. Black crayon or a rubber pen may be used to write and draw exercises on these, or rubber letters to print thereon. When needed for use, these may be hung before the children by means of clothes-line clasps, or hooks fastening to a clothes-line wire stretched along the wall, probably along the top of the blackboard, or other convenient place. Or a chart post, with hooks for hanging and with floor feet to make it stand, may be used for placing the charts before the children. The chart should not be too far away or eye strain will result.

(*4*) *Planning the work.* Each day's work must be planned and the materials arranged in envelopes, on the chart, etc., before the opening hour. All this may take a great amount of time at first, but from month to month, and year to year, the material will accumulate, and, if well kept, the selection for each day will become easy. Milton Bradley & Co., Boston, Massachusetts, will send for the asking a catalogue of such material.

Questioning. Questioning is an art which only experience can develop, yet experience does not always develop it properly. The experience must be thoughtful and well guided. The young teacher should constantly strive to become a master in this art. The lazy teacher will be careless and unmethodical in questioning, and even some who have had experience enough to attempt authorship of textbooks will put therein such indefinite questions as, "What about witchcraft"?

(1) Questions should be definite and free from ambiguity, so that only one good answer can be given.

(2) Clearness is a good quality. If the points are clear in

the mind of the teacher, the questions are apt to be clearly worded. These should be adapted to the age of the child.

(3) Questions should be carefully worded, so as not to indicate the answer, and, generally, not to be answered by yes or no.

(4) Some questions are merely to test memory or preparedness. These have a large place in the testing recitation. Often these should be framed so as to provoke thought. Other questions should be given purely as thought-questions.

(5) The questions to be put to the class should be planned beforehand, so as to be connected, orderly, moving smoothly from one point to the next, and covering well the lesson. The young teacher should block out questions before calling the class. These may not be asked exactly as planned, for unexpected things will be developed in the recitation, pupils will raise questions, and the skilled teacher will always take into account the mental attitude of the class. To put aside pupils' questions just to continue without break the questions planned would be blind teaching. And yet this does not argue that a teacher should not prepare a series of questions. Planless, aimless questions will always be poor. There should be a few questions touching the most important points, and these can always be reached, even by roundabout ways, led by questions from the class. Class questions must not be ignored.

(6) Nearly always the teacher should ask the question, then name the pupil to give the answer. This makes for better attention, and all get the benefit of the question and the reply.

(7) Rarely should the question be repeated at request of the pupil. The fault is mainly of attention. Sometimes, however, the fault is in the question, and the pupil may not quite comprehend, though attentive.

(8) Questions should be well distributed over the class to

give all the needed opportunity for expression, and to keep the whole class attentive and busy.

Questions should follow one another with sufficient rapidity to keep up a spirited forward movement.

(9) Rarely ever should questions be asked from the book. The lesson plan well prepared will tend to free the teacher from leaning on the book.

(10) The pupils should be required to give answers in good sentences. The answer should not be repeated by the teacher, but the attention of the whole class may at times be directed to it some other way, for needed emphasis. Young teachers must guard against this habit of repeating. It is a common habit, easy to fall into, and an excellent illustration of how unthoughtful experience may go wrong. Experience alone does not always make a good teacher.

Orderly thinking and talking. With small children the answers are necessarily brief. As pupils grow older, they should be expected to cover more in an answer. If the lesson is chopped up by too many questions, pupils do not form habits of orderly thinking and talking. It is much easier to go through a lesson if led by questions than if required to connect up the points in an orderly way, and thus think the lesson through without leaning on question crutches. The topical method can come in more as the pupils mature, and each question can cover more in scope. This will greatly aid in teaching children to study and to express their thoughts. But, as indicated previously, questioning must supplement topical reports, to make pupils round out the discussion and to induce thoughtfulness. And if a pupil memorizes so as to repeat too closely the language of the books, pointed questions should be speared at him to jump him about, to make him think, and to break up his bad habit of using too freely the reproductive memory.

Plans of lessons. We have again and again stressed the

importance of orderly plans for the month, for the term, and for every lesson every day. The oldest and best teachers never cease to plan. Subject-matter is changing, new books come into use, and fresh matter by way of examples and illustrations should each year be brought in even with the same old books.

(1) The first step in planning is to become familiar with the subject to be taught. An outline of the chief points in the lesson should then be made out in natural order. Notes should be added under each point as to illustrations and correlations.

(2) Suggestive questions should be blocked out, the most important of these marked for connecting links and for emphasis.

(3) A list of material to be used should be made out. The teacher should see that this material is ready, and think out exactly how it is to be used. This will include objects for number work, primary reading, nature study, pictures for illustration, passages in other books marked to be read, extra assignments for the quick pupils, charts, maps, and all such.

(4) Every plan should consider time for summarizing the main points, and for assignment of the next lesson. Full time must be given in assigning new work. Pupils must understand the aim of this work, just what is expected of them, and directions be given for doing the work. Time must be taken to make clear the aim and to arouse interest in its accomplishment. The class may then be sent to do the work. Rarely ever should the assignment be merely, "Get the next lesson."

QUESTIONS FOR DISCUSSION

1. Take some topic to be taught in history and write out what you would do or say under each one of the five steps. Likewise for some topic in arithmetic.

2. Recall which of the teaching aims was mostly used by your teachers when you were in the elementary school.
3. What are the objections to repeating a question? To repeating answers after pupils?
4. When should the work of the preparatory step be done, at the close of a recitation or at the beginning? When may this vary?
5. Why is well-planned desk work of so great importance in rural schools?
6. How can you keep the brighter pupils at work while the duller ones have time to master a lesson?
7. To what extent will you permit pupils to work in groups and assist one another?
8. Find out more about Horace Mann.

BOOKS FOR TEACHERS

Betts, G. H. *The Recitation.* (Houghton Mifflin Company.)

Earhart, Lida B. *Types of Teaching.* (Houghton Mifflin Company.)

Earhart, Lida B. *Teaching Children to Study.* (Houghton Mifflin Company.)

Hall, John. *The Question as a Factor in Teaching.* (Houghton Mifflin Company.)

Especially full treatment in teaching the story.

Jones, Olive M. *Teaching How to Study.* (The Macmillan Company.)

This is good for desk-work suggestions.

McMurry, Chas. *Method of the Recitation.* (The Macmillan Company.)

McMurry, Frank. *How to Study.* (Houghton Mifflin Company.)

An excellent book for teachers' use.

Wilson, H. B. and G. M. *Motivation of School Work.* (Houghton Mifflin Company.)

CHAPTER VII

DISCIPLINE

DISCIPLINE is the feature of the school which first puts the young teacher on trial. Experience may count for the most in matters of discipline, and it is well for all teachers to garner from the experience of others. In actual class instruction there may be much faulty work done without bringing adverse criticism, for, while not many people can judge teaching processes, nearly every one thinks he is a judge of school discipline. Even the children will scent quickly the disciplinary weakness of a teacher. Self-confidence will go far in putting a beginning teacher on her feet in discipline, as well as in class instruction. Previous study of the principles of school management, of the records of the school, and of the peculiarities of its people will help to overcome timidity or hesitancy and contribute to the firmer grasp of confidence.

I. GENERAL PURPOSE

Discipline in the school has for its purpose the necessary adjustments to preserve harmony. Discipline in the child has for its purpose the harmony of life. It is more than fault finding; it is finding and developing the good, and substituting better for the worse which may have crept into the child's disposition through heredity or early environment. There is much that is natively good in every child. Rousseau maintained that the child is born with tendencies entirely good, that everything fresh from the hands of the Creator is good, but in the hands of man everything degen-

erates. Earlier theology had insisted that the child is born totally depraved, and that we must deny and crush out all natural tendencies. These theories represent the extremes of the pendulum. The weight of scientific evidence seems to place the happy mean nearer to the claim of Rousseau, yet in every child's nature there are contradictions, elements at war with each other. Development should bring these elements into harmony with the good, the kingly element.

This we do know, that whatever is implanted will have a natural tendency to grow. Mental and moral vigor grows like the body grows, in an irregular way or by fits and starts. Variableness must be expected in every growing child. Steadiness in high purposes should be the goal of development. The teacher and the school must set and exemplify the highest standards of life, and the highest function of discipline is the development of ideals corresponding to these standards and the reduction of these to practice in so far as the life of the school will permit.

II. More Specific Purposes

The common notion of the function of school discipline is that of good order, so that the work of the school may not be hindered. This view, taken alone, would imply that discipline is an incidental evil, and that the chief work of the school is something apart. Good order is necessary that the work of the school may proceed, and yet discipline is to reach certain essentials in the proper development of the child. The preceding topic treating general purposes aims to emphasize a function in common with all phases of education.

Among certain aims, one to be singled out for emphasis is the preparation of pupils for life in organized adult society. Practical teaching may aim at successful earning of a living; practical discipline should aim at successful participation in

the best life of the community. This will develop individual initiative, yet inhibit tendencies inconsistent with social welfare in group life. Democracy stands for freedom of the individual, yet when the exercise of that freedom interferes with the freedom and happiness of others, there must be checks for the good of all. The child is a natural individualist, and must gradually learn and be trained into the regulations of the social order. This includes all social regulations, from manners and customs to morality and the laws of the land. The playground again offers opportunity here, hence its place as a necessary part of the equipment of the school. Social and moral training enter as factors in school discipline.

Another purpose to stress as a corollary under the preceding one is the gradual development of all self-control. The immediate rather than the remote at first dominates the child. It would rather take the nickel for candy to-day than the promised thousands some years ahead. The value of remote ends must be impressed, the child brought gradually to the power and the willingness to sacrifice the pleasure of the moment for the higher good to follow, and thus come to realize what it means to sacrifice the lower, baser self for the higher, spiritual self in which alone can harmony of life be found.

This broader notion of discipline calls for its exercise in such a way as to make it educative. The methods of doing this, like methods of instruction, should be progressively adapted to the different stages of child growth.

III. General Methods in Discipline

Following the order of development of government in the race we should begin with absolute monarchy, and gradually move towards ideal democracy. The first type

of school government then would rest upon the teacher as monarch.

The teacher as monarch. This method long held sway over the school, and it still has its place, modified by modern ideals. The harsh, unreasonable discipline of the past is not to be repeated, yet the teacher is *in loco parentis*, and also an authorized community officer of law and order in the school community. The absolute authority of the teacher is the simplest starting-point in discipline of young school-children, and good order must be grounded in this authority. Before the age of discretion or rational self-direction, children expect to be told exactly what to do and expect punishment for disobedience. They sometimes come and ask to be punished for an offense. They then feel that they have paid the price and so have relieved their consciences.

If habits thus formed are rational, they are anchors for the child as he grows older and begins to think for himself.

The exercise of this method, however, is not so simple as it may seem. Some children enter school without having formed the habits expected of them at that age. They may be the children who have been under little restraint, — spoiled or neglected children, — who must be placed under rather strict authority until they catch up with their age in school habits. They may be children who have been over-disciplined and are apt to turn liberty into license through misconception of school life.

In addition to the above, cases arise with children who have formed bad habits, and who may defy authority or disobey so willfully that speedy and condign punishment is necessary to check such behavior, and also necessary for good effect on public opinion in the school and in the community. The danger in the use of this method lies in its extreme application, as of old when the teacher was task-master and tyrant. This will breed a spirit of opposition to

authority which rather prevents the substitution of other methods as the pupils develop. Tasks, punishments, and all absolute authority must be reasonable and timely.

The dominating personality. There is probably another phase of the teacher's absolute sway, due to a peculiar personality easily giving the teacher a dominating personal influence. Such a personality finds discipline easy and its possessor may boast that "Johnny" — the terror of previous teachers — "gives me no trouble." Such teachers are generally the ones who are considered the born ones. They have a very useful power which may do much to smooth their professional pathway.

But there are dangers in the use of this method. The useful power is sometimes mere personal magnetism which produces a state of hypnotism. Hypnotism may be justifiable in treatment of extreme cases, but it is very generally discredited as dangerous in its effects on will power. Remove pupils from the spell of this teacher, and they may go to pieces under the next teacher, who ordinarily may be good. Like tyranny, this dominating personality may prevent the gradual substitution of better methods as pupils advance. The teachers who depend entirely upon personal influence are apt to be blind to the principles of character development and scorn other methods than their own. Wisely used it is the mildest form of absolute sway of teacher over pupils, and it should gradually emancipate its subjects for individual freedom and initiative of rational self-control.

Discipline through interest. This method secures discipline through vitalizing the school work, and introducing many valuable studies and activities to keep pupils interested and busy. The doctrine of interest applies here, and the introduction of nature study, drawing, story, literature, agriculture, manual training and domestic science, along

with the relating of the common branches to rural-life needs, will have a very remarkable effect upon discipline. Many a school is orderly because it is interested and busy; many a school is disorderly because it is neither.

Discipline through self-interest. This is a modified phase of interest wherein appeals are made to the advantages accruing to the pupil. Because of failure to see such advantages many pupils drop out of school too early or become unruly in school. Some of these advantages which may be pointed out are the following: —

(*1*) *The development of skill.* The desire to become skillful may be aroused by the appeal, if the value of skill is appreciated. The difference between skilled and unskilled workers may illustrate. This appeal may be useful in drill work, which otherwise may repel many who are blind to the purposes of drill.

(*2*) *Mental power.* Nearly every pupil will desire to possess a good brain, with its accompanying power to think, to invent, and to lead.

(*3*) *Financial or industrial success.* The need of education for this in the modern age may be shown. The day of great self-made men is largely past. Of course the work must relate itself to life so that the pupils may appreciate this appeal. And the money values in scientific farming can be readily shown by results cited.

(*4*) *The development of appreciation.* It should be pointed out how much of future happiness or misery depends upon this.

The method of self-interest sets up more remote ends to substitute for immediate desires. The danger in it lies in the direction of selfishness and material welfare as supreme. This danger will arise if this method is unduly stressed and made final.

Discipline through awakening higher ambitions. This

method will aim to create a desire to do something worth while, to be somebody in the world, and to contribute to the best life and happiness of the school, the community, and the world. These ambitions will furnish the antidote for the shortcomings of previous methods. Morality, with its generalized ideals and the ideals embodied in characters of literature and history, may be used to appeal to and to dominate the highest nature of each child. Thus may the better selves be brought to rule the lower, imperfect selves, and school discipline be made to contribute to the highest product of the school.

If these methods are progressive from first to last, the lower giving away repeatedly to the higher, the first method reduced to the minimum and the last magnified, school discipline will be truly educative. Pupils will thus be brought to realize the values of the restraints and the necessity of the tasks in the preparation for life. Also the teacher will come to be recognized as a helper toward great achievements and not looked upon as the tyrant and taskmaster of olden times.

IV. Disciplinary Measures

Putting together in a new way our scheme for school discipline, the following analysis may show in a better way the measures which may be employed: —

1. Preventive Measures

Good organization and instruction. The very best preventives are good organization and good teaching. As set forth under school organization, good equipment, proper seating of pupils, ventilation and lighting, a well-balanced program for work and recreation, play organized, naturalness in moving about the room, and pupils drawn into assistance

in teaching and order are all factors in preventing cases of discipline.

Under good teaching may be included the teachers' knowledge of subjects, skill or command of the technique of teaching, and the spirit of coöperation aroused with self-activity provoked on the part of the pupils. Pupils are inspired to greater confidence in the teacher who is a master of the subjects, with a fund of contributory knowledge.

Everybody, young or old, admires skill in doing. People will stop to watch a sign-painter, a rope-walker, or any executioner of the commonest kind of work, if the work is being skillfully done. The teacher who shows skill in everything connected with the work of the school will command admiration greatly to the aid of discipline. Then if the work of the school draws pupils into coöperation in management, they are apt to resent any interruption or disturbance on the part of one of their number.

Furthermore, good teaching arouses greater interest, which in turn is a great preventive in discipline.

Repression *vs.* expression. Formerly school government was one of repression. If a pupil was caught looking out of the window he was called to books summarily, and if caught drawing pictures he might expect to have his ears boxed. "Absolutely still" was the order. But child nature is better understood now, and attempts to force attention that way are supplanted by other methods, chief of which is that vitalized teaching which builds permanent interests. Disorder cannot thrive with enthusiastic, well-directed teaching which keeps children busy at profitable work, nor can order thrive with opposite conditions. This may be considered the first rule of order.

Naturally the attention of children is easily distracted. The teacher must guard against these distractions, both to prevent and remove them. Certain cronies should not sit

together, for the temptation is always strong to talk over mutual experiences. Interruptions to ask the teacher something during recitation, to get a drink of water, or to leave the room should not be permitted. It is a good plan to have an open few minutes nearly every half-hour, when pupils may whisper about lessons and may move about as needed. This is a helpful relaxation. The hour and a half between regular recesses is too long for severe application to study. The period of relaxation will give opportunity to admit fresh air, will justify good habits of study between periods, and will help to remove many distractions.

Mere suppression of the natural tendencies of the young is the poorest method of discipline. These tendencies must be properly directed, and superb teaching is a first factor of this direction. Good school organization is a second factor which may include necessary equipment for keeping pupils at work.

2. Constructive Measures

Forming good habits. Among constructive measures the formation of good habits of working and acting stands first. Among these the more important are: —

1. Promptness. In business lack of promptness is not tolerated. Men must meet engagements and attend to business on time. Children should learn the value of this in every duty, and practice should form habit. There should be no lagging, no straggling when classes or school is called. Regular attendance every day and punctuality every morning should be stressed. The teacher also must be prompt in all matters. Reports sent to parents and an honor roll of promptness may be used as incentives.

2. Industry. Pupils should be brought to appreciate the value of industry, and urged on to form the industrious habit. The opposing vices, laziness and idleness, are not to

be tolerated in school or later life. All pupils must be required to perform the expected tasks. Interest will keep pupils busy, but they must also face in school and in after life many tasks not so interesting, hence they must be trained not to shirk duty. Genuine industry is to be found where there is devotion to one's own work. The best training in it will come through assignment of individual work. Here again the rural school should have the advantage, for rural children generally get home training in individual chores, and the school can follow this up with individual assignments for daily recitations, for school or home gardening, agriculture, home economics, school fairs or exhibits, special-day programs, manual arts, etc.

3. Neatness and order. Beginning with first-year pupils, neatness and cleanliness of person and dress should be looked after. Desks and books should be kept clean and in order, a place for everything. School work must be neat. Slovenly work should never find place in school exhibits, and such exhibits may serve as strong incentives to neat and orderly work.

4. Self-control. This very valuable habit may receive attention in many directions. There are two valuable lessons for children to learn: first, that there are times when they must keep silence; and second, they must respect the rights of others. Both are involved in keeping silence in school. This need not be the pin-drop order of repressed silence. There may be a necessary hum of industry and a naturalness of moving about, yet there should be a degree of silence not to distract attention and thus to interfere with others as well as with themselves. Keeping pupils from whispering and other unnecessary communication is to enable the school to do its work, and it is also a training in self-control. Let there be times for asking about the lesson, for getting a drink of water, for leaving the room, for any-

thing else which might be an interference, and train pupils to wait the proper time.

Control of the tongue and the temper may be inculcated as a matter of good breeding. The tongue is the unruly member and, if restrained, the temper will follow suit. The good-breeding manifest in it will appeal to most pupils. Gossiping, tale-bearing to cause trouble, saying unkind things to or about the others, — all should be roundly censured as ill-bred. Has it not been said, "He who ruleth his tongue is greater than he who conquereth a city."

5. Politeness. "Politeness is the virtue of civilization," and true politeness is the flower of good breeding. There is the spirit of politeness that is unselfishness, and there is the form of politeness that is outward behavior. Since expression deepens impression, the outward acts of politeness will strengthen the true spirit. The Chinese claim to be the most polite people of the world, and they are admirably polite. So are the Japanese. The American young people are accused of being excessively impolite, especially with respect to older people and people in authority, wherein the Chinese excel. The English opinion of Americans is that they are shrewd, but that they have very poor manners.

Without comment, the following are mentioned for attention in inculcating forms of politeness: Table manners, talking manners, when to say "Pardon me," when and how to give place to others, lifting the hat, respect for elders, treatment of visitors, introductions, behavior in public places, respect for law and those in authority.

Creating a wholesome school spirit or atmosphere. The spirit of the school makes for its life and order. In the past there has been too much of the attitude of teacher and pupils setting themselves over against each other as rather antagonistic. The teacher was policeman, and the children watchful of opportunity to make mischief. The modern concep-

tion calls for a new school spirit which manifests itself in "good order, courteous behavior, and aggressive industry."

This subtle school spirit is a complex product into which the community, the pupils, and the teacher enter as factors. Upon going to a new school, a teacher finds a spirit or atmosphere which is an inheritance from past sessions. If this is a good spirit, happy should that teacher be. If it is a spirit of indifference, of no community coöperation, of no pupil-teacher friendly helpfulness, of teacher-baiting propensities, or of other undesirable factors, the teacher must set to work to destroy the old spirit through the creation of the ideal one.

The teacher must first win the respect of the pupils. The school must be taken hold of with firm hand, good organization effected the first day, work started off briskly, a spirit of friendly helpfulness manifested by the teacher, and something of the plans for the session explained so as to appear to take the pupils into confidence. Some teachers can quickly attain this respect; others must achieve more slowly. But if the teacher's heart is right and she is capable, this respect can be attained.

Reconstructing a school community. If the surroundings are not such as to make the pupils proud of their school, the grounds bare, the building unattractive, the equipment poor, the pupils must be interested in righting things. Take part of a day off to clean up the yard, start some flowers and vines, tidy up the interior, and make things comfortable with a promise of the beautiful. If a meeting can be had to accomplish something of this before opening school, so much the better. There will be plenty more to be done. Get the pupils to suggest and to help make out a list of needs to lay before the trustees. Make pupils allies in reconstructing the environment and in enlisting the trustees.

By the end of the first month, get up a special-day pro-

gram, have some work of pupils ready to exhibit about the room, have an entertaining story to tell, have pupils read, sing and tell stories, or do anything you find out they can do to contribute to a good program. Then send special invitations, see people personally, and do anything suggesting itself to induce parents and others in the community to come out. Ask the minister or the county superintendent to talk ten or fifteen minutes on the spirit of coöperation and the needs of the school. The teacher may supplement what is said of these needs. The aim is to win the respect and stir up the pride of the community. Repeat the occasions to get the parents out, and soon there may be a community spirit which will yield rich fruit.

All this time from the very first the work of the school must be vitalized through the introduction of new subjects and relating of all to rural life, as has been suggested before. This will contribute greatly to the new school spirit by furnishing new incentives and inspiring earnestness, happiness, and joy in work and play. Then, as it is possible, add to the playground equipment, the library, the beauty of the grounds and buildings, and the equipment generally. Rally the pupils to prepare for the yearly contests and exhibits, the county school fair, or the district meet, to win a good name for their school, and the tonic of enthusiasm will bring about a working unity which will manifest itself in a school spirit of rare value, a spirit of happiness, obedience, loyalty, earnest work, and good will. Such a school will become almost self-disciplining and a joy to the teacher.

If the school is a consolidated one, the procedure is much the same, the principal and teachers planning jointly the campaign and the programs for special days.

Use of incentives. Among the more common and more easily used incentives to work and good habits may be mentioned: —

1. Prizes. A common incentive of the past was the offering of prizes. It is now generally conceded that the offering of scholarships or general excellence prizes, which will result in a contest between the few best pupils only, is not good. The stimulation needs to be applied to the inactive and the slower ones, and prizes of the older sort are often taken by the gifted pupils with ease. It seems that prizes for best results in making certain handicraft articles, in cooking, sewing, poultry-raising, agricultural activities, and the like, are fairer in the opportunity for all to compete on equal grounds.

2. Standards of excellence. When the distinction offered is open to all alike, so that the winning by one will not mean the loss by others, the incentive is better for character building. An honor roll for those who conform to standards set up is an illustration. There may be weekly and monthly honor rolls. One plan is to place the rolls in some prominent part of the schoolroom for a specified time, and to change weekly and monthly. Opposite each name may be a black star for good results of work, say eighty per cent or over, a red star for excellence of deportment, and a blue star for application and improvement. Other stars might be used, say one for attendance. Another plan is the selection and display of good work. Wires or cords along the walls may be used for this display, the papers, drawings, spelling slips, maps, compositions, etc., may be hung to these by clasps or clothes-pins. The best of these will be used for display on special school occasions.

In this plan, standards of achievement can be set up as in athletic records, and ambition stimulated to beat the records. A pupil may thus rival himself for progress. Special mention of those who make the most progress can be made.

3. Group rivalry. Group rivalry is often wholesome. This is true in games when one side plays against another. It is

the same in spelling bees. Dividing a class into sections and the school into camps in other work may be used to same advantage, thus appealing to wholesome emulation.

4. School reports. Reports sent to parents, monthly or oftener, noting scholarship, attendance, application, and deportment, are necessary in keeping parents in touch with what children are doing, and these serve as incentives when wisely used. The danger has been in making too much of marks in themselves.

5. Appeal to personal gain. The appeals to personal gain may be in the nature of appeals stressing the necessity of preparation for success in life, and showing the need in life for everything taught in school. There may be the appeal to do those things which will enable them to get on in the world, and also the appeal to cultivate those traits which will enable them to be the worthy people of the world. These appeals are for self-improvement in the development of abilities and in the development of character.

The lower and simpler incentives must be used with younger children, but the lower should be replaced by higher as children develop.

Moral training. The public school must aim to train good citizens, and morality is the foundation of all society. The supreme business of any citizen is to moralize his life and the life of his state, hence, the chief aim of the school should be the development of moral character. Moral development should transcend intellectual. What one knows and what one can do are secondary to what one is. The great question is, what are you becoming. This involves religion as well as morals. In France, England, and Japan, this phase of school work has been reduced to a better system than is found in any State in the United States.

One great trouble is that it is more difficult to reduce moral teaching to definite procedure, as, for example, in

science or history teaching, yet far more can be done to organize a system of moral instruction than has been the practice.

Methods in moral instruction. One principle of procedure which seems to be well established is that this instruction should mainly be by an indirect method, and not by direct preaching or instruction, as in arithmetic. An excellent method of introducing the child to the various virtues and vices, with their rewards and punishments, is by means of the great stories, such as fairy tales, fables, allegories, and lives of heroes and heroines in history and literature. This method has many advantages. It will permit and suggest a graded system adapted to the ages of children, and selected to introduce many virtues. It may so appeal to the child's instincts and interests as to sink into his receptive heart. It can reach the emotional life as direct instruction can never do. It can depict the whole round of conduct, showing the swift punishment of bad conduct and the immediate reward of good conduct, whereas in real life the end may not be seen. It can leave the child to do his own moralizing, and we should not moralize too directly with him.

To carry out this method, the teacher must have a series of stories to tell, and the children should be provided with the proper reading matter, and their reading directed. Religious virtues, such as reverence and faith, can well be included. Moral training need not be divorced from religion, yet everything sectarian can be avoided.[1]

[1] One of the best graded selections of most excellent matter is, "The Golden Rule Series," published by Houghton Mifflin Company, of Boston. This is a series of six books, which may be used as supplementary readers in grades three to eight, and from which teachers may select stories and also assign stories to children to tell to the school, or to those assembled for special-day programs. This series should be in the school library. The authors of this series, Sneath and Hodges, have written an excellent manual for teachers, which is a good book for study and reading-circle discussion. It is published by the same company. This book gives a fuller list of stories.

Through the hygiene and physiology of the bodily life, and through talks on various topics, morality may be taught. There is a direct relation between good health and sound morals. Proper eating, drinking, breathing, sleeping, cleanliness, tidiness, exercise, courage, and temperance have moral values. Our bodies are temples of the Holy Ghost.

Through natural science we face a great Creator of all things whose wisdom is manifested, whose laws we study and obey, and whose laws in the moral and spiritual world are just as binding and as wise as in the physical world.

Moral forces of importance. In addition to the foregoing fields of moral instruction there are forces we should consider because of their great moral influence. Chief of these moral influences are play, work, art, and the social atmosphere.

The school offers the best opportunity for rural children to congregate for play, and for the best supervision of play. It also offers the best opportunity for the larger, freer association of rural children, and "school occasions" may be devised to meet many social needs with the social atmosphere at its best.

Not only play but work has a most wholesome moral influence. All play and no work will make Jack a shiftless fellow. The best way to bring children to the fullest appreciation of work is through having them work so as to contribute helpfully to the life about them. This spirit of helpfulness is a superb virtue. Children come to a period when they like to do things like grown folks. The most desirable work for children is found in and about the farm home and in connection with rural life.

In the school, manual training and school gardens are needed to furnish means for educative, creative work. The household arts are especially valuable for the girls. Then the pupils must be held steadily to the accomplishment of

school work, especially in drill work and in those subjects of study not so attractive. The work of boys and girls' clubs, of home-making industries, and of home agriculture should be stimulated and partly directed in school, reports of these made, and results exhibited at school fairs.

Thus it may be seen that practically all school work and school life are essentially ethical in their true bearings. That which has gone before, especially the discussion as to "Forming Good Habits," and that which follows, especially the consideration of "Corrective Measures," are phases of this topic, moral education.

3. Corrective measures

Some punishment at times necessary. No matter how complete our scheme of preventive and constructive discipline, some corrective discipline must come in to help the child over his mistakes and bring him to a willing response. It is similar to medicine for the body. After a while we may so care for health in better ways that medicine will have but a small part to play. Just so with the regulation of conduct. Punishments may be reduced to a decreasing minimum, but for the present we must include these as corrective measures. A bad child is a diseased member of the school. A diseased member, say a finger, may be treated for a cure, or in extreme cases, where it may threaten the whole body with its infection, it must be amputated. Likewise punishment should keep in mind that it is to bring the child back to mental and moral health. Despairing a cure and the school being contaminated, expulsion or sentence to a special school is the final resort for such children.

Even to a greater extent than teaching, punishment must be individualistic. We must first diagnose the trouble with each case for punishment, and then prescribe as a wise physician. What will cure a sensitive child may have little

effect on a callous or stubborn one. A little sympathy, understanding, and trust may go further than a whipping with an apparently hardened case who is accustomed to cuffs and blows at home. This does not mean that there can be no system, no guiding principles.

Guiding principles in punishment. There are first the general aims: —

(1) The correction of the fault and the cure of the faulty tendency.

(2) The protection and preservation of the school, including the rights of others.

There are certain things to bear in mind in selecting the punishment: —

(1) Following in part Herbert Spencer's theory, it should, where practicable, be the natural punishment of consequences logically flowing from the fault.

(2) Almost as a corollary of the preceding, the correction should seek to emphasize the virtue of which the fault is the opposite.

If the fault is one of littering the floor about his desk, he should be cautioned again as to neatness and requested to clean up the litter. If he says it was put there by some one else, and he does not know by whom, he must still clean it up, since he shares in the responsibility of keeping the school. This sharing of responsibility is the virtue to be stressed. It is partly his duty to find out the offender.

Deprivation of a privilege is a natural consequence of the abuse of the privilege, such as playing or reciting with others, sitting in any part of the room, or carrying a pocket knife. The extreme case would be to deprive the child of all the privileges of the school, which would be expulsion or removal to another school.

This punishment of consequences has its limitations and cannot always be made practicable, yet it is often good, and

makes a rational appeal to the child. He can often thus be made to see that he brought the punishment on himself.

(3) Punishment should not be too severe nor too mild in proportion to the offense. It must be effective. It is better to try mild measures first, but if these are not effective, more severe ones should be used.

It may be here added that more depends upon the certainty than upon the severity of punishments. If the teacher is lax in discipline or moody therein, some days severe and other days overlooking offenses, the offenses will multiply, for children will take their chances on escape.

One other point may be added. Formal standards and punishments are not the most effective. There should be flexibility and variety of discipline, not only to adapt to the varied child dispositions, but for the sake of the effect of the unexpected at times. The fertility of the teacher in devising new yet effective corrections will count here. Yet these variations from some rational system should not be such as to merit any hue and cry of partiality nor show lack of firmness.

Some school faults, and how to handle them. Probably it is worth while here to forecast some of the common faults to expect. Forewarned is forearmed against these. Unexpected offenses will appear, yet there are certain common ones always to be expected. It is difficult to classify these in any valuable way, and the following grouping is used merely for convenience.

1. Tattling, gossiping, lawlessness, vandalism, shielding the guilty, impudence, rudeness.

These are generally due to faulty training, wrong ideals, or lack of ideals. Reproof should first be tried. What seems to be impudence or rudeness may not be intentionally so, since the offenders know no better manners. They should be reminded of the fault, made conscious of it as a fault.

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The value to them of courtesy and gentle manners should be impressed, not only in general lessons to all but in private interviews. Tattling and gossiping can be treated in the same way. Impress that speaking evil of others is unkind, and that it has an undesirable effect on the speaker's character. Base many lessons on the scripture, "Whatsoever things are true, — honest, — just, — pure, — lovely, of good report, if there be any virtue and if there be any praise think on these things."

Lawlessness and vandalism are more serious, yet these are so common with Americans that false ideals as to public property must exist in the public mind outside the school. If cutting or defacing is done with a knife, the boy should be deprived of the privilege of keeping the knife. If damage done can be undone, a broken window restored, marks cleaned off, or restitution made in any way, this should be done, and, if deemed necessary, additional punishment may be given. The lesson of common responsibility for law and order and for the care of public property must be taught.

This is the lesson needed in the case of shielding the guilty. In the laws of the land, one who shields the guilty is adjudged guilty. A sheriff or officer of the law can call on any man to assist him, and the man is duty bound to do so. When people who know of evil doing are called before the proper authorities and asked questions they are duty bound to tell the truth. Young people are apt to have false ideals here. They have notions of group loyalty and of tattling. They should be brought to realize their common responsibility in the school community, their duty similar to the duty of grown people in the community, and when they are questioned by the teacher or school committee they should tell the truth. This is different from tattling. If punishment is necessary to get a boy to tell the truth, it is generally better to hold the whole group responsible, at the same time

580

pointing out that the guilty should play fair with his fellows. It is not fair play to let the innocent suffer for the guilty. Justice and fair play between pupil and pupil is the only high and honorable type of group loyalty. A good reputation is highly to be valued, hence a boy should not appear to be a coward or mean to his fellows, but own up to his own doings in a brave way. Also in plays and games, and in school work generally, cheating is not fair play.

As early as practicable it will be well for the teacher to give the school a platform, somewhat as follows: —

A School-Conduct Platform

1. No person has a right to behave so as to interfere with the proper rights, happiness, or welfare of others. This is true of pupils.
2. It is the duty of society to punish wrong doers. Such is also the duty of the school.
3. The members of the school, as members of society, should aid in finding and punishing the guilty.
4. If a member abuses a privilege of the school, it is proper that he be deprived of privilege, such as playing with others, reciting with the class, speaking to schoolmates in school hours, engaging in competitions, or of any privilege as the teacher may adjudge.

This platform will furnish a good lesson in civics, teaching social responsibility and social duty, and using the school to typify any community.

2. Whispering, note-writing, leaving the room too often, noisy walking. These are school disturbances, bad habits, in which energy is not properly directed. Keeping the pupils profitably busy and providing special times for communication and moving about quietly will help. Seating pupils so as to separate those given to talk, and, in case of persistent whispering, isolation of the offender in some out-of-the-way part of the room, may be effective. Noisy walkers

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who do not yield to above practice of quietly moving about may be kept back to walk out alone. Leaving the room too often should be privately investigated in personal interviews.

3. Pranks. Such as putting match heads on the floor, sulphur, cheese, or rubber on the stove, chalk on backs, hiding hats or books, and the like should not be taken too seriously, as they are probably due to surplus energy or a desire to attract attention. Neither should they be ignored. Take them calmly, suggest, not sarcastically, that the act was not admirable, since a half-wit could think it and do it. Apply consequences when fairly sure of offenders. Proper play and interesting work are antidotes, absorbing the surplus energy.

4. Fighting, truancy, tardiness, lying. These are near vices. Fighting and lying must be handled with caution, as the act may not have been vicious. Unfortunately man seems to inherit a fighting spirit from his warlike ancestors, and it takes time to root it out. Boys seem to like the excitement of a fight, and the whole crowd will join in nagging first one boy and then another, just to stir him up to fight somebody. The excitement of proper play will replace the desire to fight. If boys are left at recesses merely to stand around, not prompted and led to proper play, mischief will always brew. Proper play equipment and supervised play will remedy this. The fighting spirit may be directed to the winning of contests and the mastering of difficulties.

Lying is something a teacher must evaluate before proceeding against. Children are prone to lie, and the act does not necessarily indicate a great degree of moral depravity. Still it should be corrected. It may be due to mere fancy, the imagination giving such vivid pictures that the child does not readily distinguish between what he imagines and the

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reality. This generally leads to gross exaggeration which should be corrected, though not punished.

But there is the lie which is "the ever-present help in time of trouble," a common one in schools; also the lie which seeks intentionally to create the wrong impression, or to be merely for lying's sake, and which leads on to the vicious habit of lying; and the lie which is part truth with something held back. These are all serious faults, and should be checked in early youth before they develop into more serious moral vices of later years. The teacher must persistently hold up ideals of truth, and, when necessary, supplement these. Dr. Stanley Hall says in this connection, "There is still virtue in the rod." First seek out the motive, and this will guide in what to say or do at the beginning.

Tardiness and absences should be promptly reported to parents when not explained by them. If absence proves to be a case of truancy, the work of the school may be at fault, or it may be merely due to the "call of the wild." Parents should help to avoid tardiness and absence, yet the teacher should investigate each case. Transportation of pupils will eliminate most cases under this group.

5. Vices. Such as lying, cheating, gambling, smoking, chewing, obscenity, profanity, idleness. The isolation of the country is not sufficient to prevent contagious spreading of such vices. It is an old saying that a lie will travel so much faster than the truth. These vices seem to be able to pervade the remotest corners, and children, being imitative, become contaminated. The school does not receive its children with unspoiled minds and with unformed habits. Here again the teacher must go carefully after information of the moving causes. Sometimes bad habits of parents, or the indifference and even vicious sentiment of the community are responsible. This does not mean that the vices should be tolerated in the school. The teacher should do all

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in her power to stamp them out, yet the children must not be considered naturally depraved when they only reflect their surroundings. If a boy's father and older brothers use tobacco or profane and obscene language, it is but natural in the boy to take these up. Sometimes a boy feels that it is manly to take up these things, which, when true, is a sad reflection on the ways of men that such things should be thought manly.

Upon the slightest suspicions the teacher should interview any probable offender, and try to convince him that the practice is bad, that it cannot be tolerated in and about the school, and that he must promise to desist. It is sometimes best to take a written and signed promise, then let the offender understand that he is on parole during good behavior. Give him to understand that you wish him to reform and that you must protect the school. If offenses are repeated they must be dealt with in increasing severity, the last resort being expulsion, or the reform school. All the while moral instruction must strive to create ideals and school sentiment against such things.

If cheating and idleness appear they may be due to the nature of the work or the overexactions of the school, or they may be due to physical defects of the children. The cause should then be found and removed. Obscenity may crop out in writings and drawings, especially in the outhouses. These houses should be constantly inspected, and, when the teacher is sure of sympathetic assistance, two or three of the best boys may be confidentially appointed a committee to help to prevent or to punish offenses. A similar committee of girls may be helpful. These may be committees to assist in playground and all outside activities. These committees can be very helpful and their coöperation will be helpful to them. Supervised play and the transportation of pupils will remove most of the opportunities for prac-

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tice in many of the vices of rural children. Again and again we must stress the very best in physical environment for the school.

Corporal punishment. For many years this field has been a battle ground of contenders for and against. Naturally the pendulum swung to extremes, and now seems adjusting to a rational mean.

In years gone by corrective measures were harsh and even cruel. We have been told of school committees who, when examining a teacher applying for the school, would call in an unwitting boy who was to be caught and thrashed by the applicant by way of proving his fitness. The reaction finally set in for milder measures in dealing with the young. Many people took the position that corporal punishment was wrong *in toto*, and many school committees have forbidden its use. However, the best authorities now favor it in certain cases, maintaining that with younger children it is often very effective. Further, it should not be ranked as the last resort, since expulsion is still more serious. Miss Morehouse[1] gives the following paragraph to the point: —

> Corporal punishment is "a relic of the dark ages." So are those characteristics of human nature that will respond to no gentler stimuli. So are all the conditions of our living which keep alive the brutal in mankind. But to assume that all human beings, and especially those whose powers of rationalization are still rudimentary, may be governed by the motives that at present only the more advanced people comprehend, is utter foolishness. To formulate an ideal of human relationships from which force may be eliminated is a helpful and inspiring exercise; to base a comprehensive system of practical control upon it, to be applied to human beings now, is a Quixotic fallacy.

Though corporal punishment is a dangerous privilege which may be resorted to too often by weak teachers, yet

[1] Morehouse, F. M., *Discipline of the School*, p. 198.

it should not be entirely forbidden. When administered, it should generally be in private, sometimes in the presence of a reliable witness, never in the presence of the school, and with a switch as the instrument. The teacher should try many substitutes, such as, private talks, written promises with parole, interviews with parents, and other punishments. Then, when a good switching seems advisable, it should be administered. Children begin to assume a different attitude toward these matters with the age of puberty. After that age corporal punishment is not advisable, and stress should be placed on appeals to manly and womanly qualities, use of the record of offenses with promises to refrain, and such other measures as may appear to fit the case. If such an offender can be brought to see that he has done wrong and that there is no return that he can make except through resolve and effort to do better, his reform is begun. If the case is persistent or flagrant and open, and thus one which calls for prompt action to protect the school, the higher authority of the trustees or principal should be evoked, and the case laid before such authority with all the records as evidence.

Improper and proper punishments. The following is a brief summary of the forms of punishment which may be regarded as improper and proper for a teacher to use: —

1. Improper punishments. Improper punishments are such as ridicule, sarcasm, boxing the ears, other personal indignities, nagging or continual scolding, threats, tasks from school work or the Bible which may cause dislike of these, depriving entirely of recesses, depriving of well-earned marks, any harsh, cruel, or injurious treatment, and any taking too much of the teacher's time or the time of the school.

2. Proper punishments. General reproof to the school as a warning, private individual reproof, public individual or

group reproof, isolation, deprivation of privilege, restoration of damages, holding groups responsible, reports to parents, signed promises, reasonable detention, and, in extreme cases, corporal punishment, suspension, and expulsion

QUESTIONS FOR DISCUSSION

1. What kind of school will give least trouble to discipline? Discuss all factors.
2. What are disadvantages in changing teachers frequently?
3. What more is the aim of discipline than merely keeping order?
4. What effect on a school when a teacher is too strict? Too lax in discipline?
5. What trait, if any one can be selected, in a teacher will go farthest to win the respect of pupils?
6. Make a list of appeals which may be made to self interest to promote study. Observe pupils a few days and try to decide which appeal is best adapted to each pupil.
7. What is the "punishment of consequences"? Illustrate. Wherein is it not possible?
8. What are the moral effects which may be produced through each one of the common school branches?
9. What dangers in prizes as incentives?
10. How will school fairs help discipline?

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PART II

TEACHING THE ELEMENTARY-SCHOOL SUBJECTS

CHAPTER VIII

INTRODUCTORY

Child needs and cycles. In the selection and arrangement of the fundamental subjects to be taught, two things must be kept in mind: —

1. Adaptations to the stages of child development.
2. The child's needs in the social order in which he must live.

In the brief study of the periods of child growth it has been pointed out that the first six school years constitute a peculiar cycle which may be called preadolescent, and the second six school years another cycle, the adolescent; also that the second six may well be divided into periods of three and three. Practice in some States would make this second cycle one of five years, divided in three and two.

Fundamental studies of the first six years. The first work confronting the teacher in the first cycle is that of thoroughly grounding the children in the preliminary fundamentals, reading, spelling, writing, and elementary arithmetic. These first essential subjects have been called the tools of education. No pains should be spared to give the child an easy familiarity with these tools, and skill in their use. The modern school has been accused of some slackness here, some falling-away from the efficiency of the old school. The fundamentals of this first cycle should include ease and correctness in the use of language, spoken and written; some interpretation of the natural environment; familiarity with the story of the settlement and development of the local community, the State, and the Nation, with something of the history of the world's great peoples; a brief knowledge

of the world, its surface, peoples, and products from the geographer's point of view; an introduction to the laws of life and health, leading into practices of hygiene and sanitation; a beginning in handicrafts for boys, home economics for girls, and agriculture for both; and a training in appreciation which will lead to the higher pleasures of living found in such as art, literature, and the beautiful life. These fundamentals indicate the subjects to be taught in the elementary school.

The upper grades. The second cycle is now partly included in the elementary school and partly in the high school. It should all be included in the high school period in its junior and senior groups. Its work should be to put the child into fuller possession of his social inheritance of human knowledge and achievement, and to equip him for a successful life in his community. Vocational education would be included in this second part of the work, and, in rural schools, this would be mainly agricultural education.

What this second part will include. In the following chapters the elementary cycle is the one in view, though the treatment often extends into seventh- and eighth-grade work, since these grades are as yet so generally organized in the elementary school.

Most of our States have their own manuals of State course of study, which include more or less specific methods of treatment. The aim in this volume is to supplement these State manuals, not to supplant them.

156

CHAPTER IX

READING AND LITERATURE

Importance of reading. Reading is the tool of greatest importance, since it is the key of approach to other subjects. The child on entering school has reading as his first problem, and much of future success depends upon the work done by the teacher here. Reading is not only the means of approach to other school subjects; it is the great means to knowledge and to enjoyment through the years of life.

Reading has been tersely defined as "thought-getting and thought-giving." By "thought-getting" is meant interpretation of thought from the written or printed page, which is silent reading. By "thought-giving" is meant the expression of the thought as interpreted, which is oral reading. Naturally the interpretation must precede the expression, and silent reading is more extensively used by all; hence, in teaching, great stress should be put upon the thought getting. As too often taught, the stress has been upon the mere naming of words or meaningless repetition of sentences. The mechanics of reading must first be mastered, but the teacher must lead away from mechanical reading to the spiritual interpretation.

The child has acquired ideas and has related these into thoughts. He has quite a vocabulary of words, and can use these in sentences to express his thoughts. These ideas and thoughts, associated with spoken words and sentences, are to be associated with written and printed words and sentences. The written and printed forms must first be learned so as to be recognized by form and related to proper sound and meaning. This is the mechanical side of beginning to

read. There are several methods variously used to accomplish this beginning.

The alphabetic method. The first method widely used taught the alphabet, then combinations of letters into such as *ab*, *eb*, and *ib* to a spelling of words, and finally the building of words into sentences. Sooner or later this got children into reading. Since this method taught reading through spelling, claims have been set up that it made better spellers in the olden days. But many objections are entered against it.

As a basal method, it has been discarded, but with any other method the letters must finally be taught and used in spelling.

The word method. This is the most widely used basal method. The child is given words, and drilled to their recognition separately and in sentences.

This procedure seems to follow the manner of first learning oral language. The child speaks words first. This method proceeds from the known to the unknown, from the word as a whole to its parts, and it uses the word as the unit of language.

Objections are entered against it: —

1. It does not give greatest power to recognize new words.
2. It may lead to word naming, the mechanical reading previously mentioned, the emphasis on words rather than thoughts.
3. It does not make good spellers.

The sentence method. Whole sentences are presented, and the children are drilled to their recognition. Since the sentence is the unit of thought, this plan appears to have logical claims. It leads to ease and naturalness of expression. The sentence, though, is too complex to begin with. All study of the development of the speech of a child has shown that the word is the unit, and the child first isolates single words as units of thought.

Not many sentences can be thus presented, too, because most sentences are too long and too complex. In consequence pupils must give their chief attention to the words.

The phonic method. This is somewhat similar to the alphabetic, but the sound values rather than the name values of the letters are first taught. The letters *c*, *a*, *b*, are taught as sounded in speaking the word, *cab*, slowly with shifting emphasis as the sounds are uttered, *c-a-b*. Similarly other sound values are taught along with their symbols.

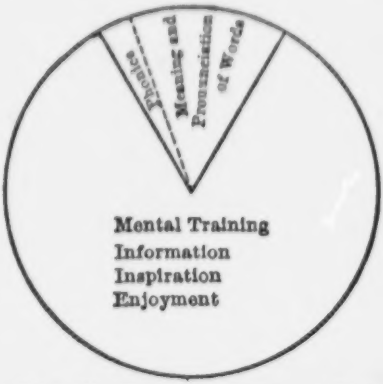

FIG. 10. DIAGRAM SHOWING COMPARATIVE PROPORTION OF TIME TO BE DEVOTED TO THE MECHANICS OF READING AND TO MENTAL AND EMOTIONAL TRAINING.

(From Kendall and Mirick's *How to Teach the Fundamental Subjects.*)

This gives pupils power to master new words. The stress is on letters sufficiently to make good spellers. It conduces to good articulation, enunciation, and pronunciation. Pupils make great progress the first year with this method.

But all words are not phonetic. Neither is this plan in line with the way children learn language, hence it may be uninteresting.

It seems that a combination of these methods brings the strength of one to correct the weakness of the other. The most popular combination starts with the use of the word and sentence methods, and, in about three weeks after beginning, phonics is introduced. Many excellent teachers introduce phonics the first day.

In selecting the method to pursue, it will be well to keep

in mind that no elaborate system is necessary with ordinary children. The simpler the method, the better, provided it gets good results. Devices are only crutches for use in learning to walk alone. Phonics, word drills, diacritical marks, and special teaching devices are preliminaries to the supreme accomplishment of pleasurable reading. As soon as the pupils can make headway for themselves, give them plenty of interesting books adapted to their grade, and guide them to an appreciation of the wonders of literature. Given a headway of interest, pupils will make great progress through their own efforts, and thus may be accomplished the truest aim of education.

Supplemental reading needed. Our great drawback in rural schools is the lack of books for the pupils to read. There should be in every school a selection of books adapted to each grade, including the first. A well-stocked library must be secured for every school. Traveling libraries for exchange among schools are excellent for rural schools. A few primers and readers of all grades may be in every school, and these may be exchanged at stated times for different ones from other schools. In a similar way other books may go the rounds, keeping up a supply of fresh and stimulating reading matter. If nothing like this is found by a teacher in her district or county, probably she can agitate the movement to have a library year for the whole county, in some way to secure a collection of books for every school. The County Superintendent can then plan the selection, placing, and exchanging of these so as to give an abundance of new, interesting reading matter in every school at all times. As a last resort, the teacher may be able to get a few personal copies of two or three primers and first readers.

First lessons

In all studies it is best for pupils to have a motive to spur them on. A story may be read to a class of beginners, and they may then be asked if they do not wish they could read more stories while the teacher must hear other classes. Or, the teacher may engage these beginners in conversation about people who read at home or elsewhere, and some of them may tell about what they have heard read. These beginners may be assured that if they are interested and will try every day, they will be taught to read interesting things before the year is gone.

Frequent conversations may be held with these children to develop animated, spontaneous, natural expression. The word method is lacking in leading to this natural expression. At first, sentences should be put before the beginners. The emphasis may be on one or more words, but these should first appear in sentences, and the children be led to express full thoughts. Sentences supply the complete thoughts for that full, easy, natural expression so much to be desired as a result. Words are to be taught through the use of sentences.

Objective work. The teacher must have some objects of interest at hand for the first lesson, and have in mind the sentences to write on the board. An orange and some flowers will be as good as anything else. A conversation about the orange, the flowers, orange blossoms, and related interests will elicit attention and call forth the sentences to be used. Mary may say, *I hold the flower*, and John may say, *I hold the orange*. The chalk should then say these sentences. The pupils may be called out to point to what the chalk says for John, what for Mary. They may be shown where it says *the orange*, where *the flower*, where *I hold*. The sentences may be rewritten for pupils to state what the chalk says to them each time. Other convenient idioms for similar use in

teaching various words are the following: *Give me, show me, I see, I have, This is, Where is, is made of, Can you* (walk, jump, read, etc.), *Can you play* (ball, tag, etc.). Phrases such as *on the table, in the winter, across the fields*, when presented in sentences, are the agencies for teaching the prepositions. Care should be taken to secure the expression of the phrases as wholes and their recognition as wholes before the prepositions are separated for recognition. This stress on wholes, whole sentences, whole phrases, whole stories is very important for final results.

A good-sized shallow box, about two feet square, divided into a number of compartments and supplied with a variety of toy objects, such as balls, flags, tops, whistles, coins, etc., may be a great help. If several of each kind are in the collection they will be helpful in language and number lessons also. To lead to a grasp of the thought in the sentence, pupils may be called upon to do what the chalk says, *Spin the top, Hold up the flag, Roll the ball, Blow the whistle, Bring me the dime.* At other times they may be asked to repeat what the chalk says, care being given to secure natural statements. Pupils' names added to the sentences will contribute to interest.

Child interests. In the selection of first words, some thought must be given to a choice of objects of interest. Sentences should be connected in stories, gradually to be extended. This should be kept in mind in teaching words and sentences. These may be selected from nursery rhymes, fables, and familiar stories such as *Little Boy Blue, Hey Diddle Diddle, Jack Be Nimble, The Little Red Hen*, and *Hiawatha*. The lessons may be developed on large sheets of manilla paper, used as charts, the teacher making her own charts. In rural schools this will be an economy of time, since blackboard lessons consume time, yet even with charts the blackboard must be used freely. Another econ-

omy will be found in using words and sentences chosen from the primer. Many modern primers begin with the nursery rhymes, familiar stories, and classic fables, all of which heighten the interest in these first lessons and wonderfully stimulate to good expression.

Use script. This preliminary work on board and chart may be in good script. Teachers have tried imitating the print, but their print is about as different from the book print as the script is, so that experience seems to teach that there is no advantage in the print, and it takes much practice to become skillful in it. Many primers now have script along with the print so as to make it easy to pass entirely to the print, and in the meanwhile children learn to write. Rubber letters[1] may be used to print on the chart along with the script, but the first lessons may be entirely with script.

Drill cards. From heavy white paper or light cardboard, cards may be cut, and on each card some word, sentence, or phrase may be written in large script, or printed with the rubber type. These may be held before the class, and pupils called to recite what the card says. The time of exposure may be shortened until the eye is trained to quick recognition, as in reading. These cards may, after a few days, be used to save time of board writing. Several copies of each may be made to give to members of the class, for them to match the words in building the sentences with small cards, given them for the day's seat work. On each small card a word or phrase is written. Cards are given out with more words than needed so that choice must be made.

Cards with outline pictures of objects may be bought or made. Pupils may take a picture, select the word to name

[1] These may be obtained easily in almost any city, and from school supply houses. A box of figures and letters, each an inch high, and a rubber stamp pad and a bottle of ink, such as are used by grocers in printing signs, can be obtained for small cost and will prove very useful in many forms of primary work.

the object, and then draw the picture and write the name under it.

Drill cards are printed in sets to accompany many modern primers, and sample sets from some publishers will serve as models.

Phonics. The sentence-word method aims to get the child quickly into reading, and to begin with natural expression of thought. It enables children to recognize such words and sentences as have been taught. But the child must become independent, must be able to master new words, and the phonic method aids in giving this power. There is no agreement as to the proper time to begin phonics. Some say after a few days or a few weeks. Some are ardent advocates of the phonic method as the only beginning method. It is thus widely used in Germany. An enthusiast claims in his book that "children of fair ability can be taught to read and spell, the first year of school, from three thousand to four thousand words" by the phonic method. Beginning with the sentence-word method it will be safe to introduce phonics in three weeks or less.

One of the regular recitation periods given every day to beginners should be set aside for phonics, so that phonic drills may be given mostly apart from the reading.

Ear drills. Ear drills come first. Pronounce for the pupils, slowly so as to separate the sounds, giving the consonants a slightly explosive sound, such words as *Joe, go, jay, gay, row, no, so, lo, day, say, see, she, boy, joy, toy, paw, thaw, cow, my, chew*, etc. Do not write these, but drill orally until pupils recognize quickly.

Follow these with words of three elementary sounds, such as *hat, bat, cat, fat, mat, vat, sat, vet, bet, kit, lot*, etc. Simple commands may be given in which some of the words are pronounced thus disjointedly as, "John, sh-*ut* the d-*oor*." In telling stories some of the words may be so pronounced.

Probably two weeks should be given entirely to ear training, time being given until this work is thoroughly done. Then the child should be shown the letters which stand for these sounds and gradually drilled to their recognition.

Order of teaching the letters and sounds. The order of teaching the letters, with their phonetic values, varies greatly in the theory and practice of many teachers and primers. The weight of opinion favors the selection of the consonants easily sounded, such as *f*, *l*, *m*, *n*, *r*, *s*, and the short vowels for the first lessons. The short vowels are used oftener than others in common words, and this is the basis of the theory that the vowels should be learned first by their short sounds. This plan would teach gradually all the consonants by their sounds along with a few phonograms of one short vowel, then with phonograms bringing in one by one the other short vowels. Next in order would come the long sounds of the vowels.

Word's *Rational Method* teaches first *f*, *l*, *m*, *n*, *r*, *s*, *ā*, *ē*, *ō*, *ing*, *ings*, *ight*, *ights*, and after these *g*, *ī*, *ȳ*, *k*, *t*, etc. This method gives preference to the long sounds. One advantage of this is that for the vowels the long sounds give also the alphabetic names in nearly every case. It makes little difference whether the long sound or the short is taught first. Soon it must be shown that some of these letters stand for different sounds. It is easy to begin with initial *f* as in *fat*. Pupils can be led to pronounce the word separating it into two parts, *f-at*. The word should be written on the board, and the pupils taught *f* as it is sounded. The letter is then written alone, and the pupils are drilled on giving its sound. The next day *l* can be similarly taught, then a drill on recognizing and pronouncing *f* and *l*. Day by day the number is thus extended until all are taught. The alphabetic names of the consonants should not be taught until the latter part of the year.

Diacritical marks. Another point long under dispute is whether the diacritical marks should be used in these first lessons to distinguish the various sounds of any letter. Practice has set in strongly against much use of these marks. The method ought to present the least number of things to confuse. Simplicity always is a good thing to keep in mind. The words of the reading page are not marked diacritically, and the pupil is to become self-helpful in mastering these words without such marks. If such marks are introduced, they are but temporary helps.

Without the marks, pupils can be taught that *f* always says the same thing; so does *m*, *t*, *p*, etc. But *s* sometimes says *s̱*, and the two sounds can be taught in the same lesson. Examples then will help to guide the reader which sound to give when he comes across *s*. Similarly *ā*, *ă*, *ä*, *a̱*, may be together given as sounds of the one letter *a*. These sounds will be sufficient for *a* in the first few months. Pupils must be drilled on giving these sounds, and words given to illustrate the sounds. A type or family word should be learned for each sound. When a pupil meets with a new word containing *a*, he must rely largely upon the sense to give the proper sound. He should readily decide the sound of *s* in *has*, or that *city* would not make sense if pronounced *kitty*. This forces him to think of the sense, hence is not so mechanical as the diacritical marks make his method of reading.

The other letters are taught in a similar way. This has been called the "Try-another-sound" method, and it has much to commend it.

However, the diacritical marks must later be taught for dictionary work and for written drills on pronunciation. The success of the teacher and the primer in use may help to decide how much of these marks are to be taught in the beginning, and how many of the sounds are to be used the first year.

There should be a gradual introduction of the phonic words into reading sentences after a few of the symbols have been taught and blended into the words. One new word at a time will be best at first. The order of these words should follow the order of the primer and first reader in use. Some good method primers should be secured by the teacher as suggestive guides and sources of drill material to supplement the text.

Before the year is over the alphabetic names of the letters should be taught. These should finally be known in order from *a* to *z*, for a knowledge of this order will always be useful.

Other first-grade suggestions. Story work should be used along with reading. Children should tell stories back to the teacher and the class. This is the best foundation work for good oral reading, which must always be stressed. Oral treatment by story and conversation should pave the way to the reading of the story or fable from the chart or the book. Story treatment with the class by way of anticipation of reading the pupils may do for themselves will heighten interest in that reading. *The Hiawatha Primer* (Houghton Mifflin Company) is a good source book for stories later to be read.

This primer also gives outlines and plans for drawings, paper cuttings, and handicrafts correlated with the Indian legends. However, this primer cannot well be used as a reader until the end of the first year or beginning of the second year. Where the story calls for action, the child must be encouraged to accompany oral expression with proper action. Characters may be assigned to pupils, and stories given dramatically.

In *How to Teach the Fundamental Subjects*, by Kendall and Mirick, the following suggestive exercises are given as good for seat work: —

Matching words to pictures.
Sorting words or letters.
Making words from letters.
Arranging sentences from words or letters.
Matching words to their initial letters.
Grouping words that rhyme.
Filling blanks in elliptical sentences.
Making original sentences about some interesting subject or picture.
Answering questions written on the board or on slips of paper or cardboard.
Copying verses.

The words of a sentence may be written several times each on a card ruled as in the following illustrations, and copies made on the mimeograph, so as to supply each pupil with a card. The pupil is to cut on the lines and put like words together. After this is done, he is to put them together to build sentences like the one written on the board or chart. He should finally put all away in an envelope which the teacher is to keep for review work.

Jack	the	and
Jill	up	went
and	hill	up
hill	Jill	hill
went	Jack	the

down	his	fell
fell	broke	crown
Jack	and	broke
crown	Jack	his
and	down	and

All the words of a story on a full page of the primer may be written, cut apart, and placed in an envelope. Sufficient copies may be made to have an envelope for every pupil.

These words in script are to be put together to match those in print on the page.

Envelopes may be used to great advantage for preparing in advance the day's work to be assigned in limited time.

Drawing to illustrate the story may be begun in the first year. If the pupils have learned the jingle containing, "Jack jumped over the candlestick," they may be told to draw a picture of the candlestick, and then told to draw Jack jumping over.

Copying words learned may come in every day as a writing lesson.

Two periods per day may be given to reading with first grade, one period to phonics and spelling, and one period to nature lessons, language, and number. After about three months the phonic period may be given over to writing and other things, and a few minutes of each reading period may be given to phonic drills.

Older pupils may be asked to supervise some of the seat work and to give drills with the sight cards. Individual drills may thus be given oftener to any of the slower pupils. Sometimes an older pupil can be found who can take the beginners outdoors for ear drills in phonics. Words given may then more freely represent action, as in *f-or-m a c-ir-cle.* Simple directions may thus be given for games wherein each pupil is to obey as his name is called and action indicated.

Second grade

Lengthening thought-getting and giving. In the second year the thought-getting and giving may be lengthened from the sentence to the paragraph. Pupils are to read silently a paragraph, then one called upon to tell the others what it says. This one may be asked to close the book, step out to face the class, and tell what the paragraph says. If the thought is incomplete or the emphasis wrong, the

teacher should spear a pointed question at the weak point, then call for new expression.

Phonics, word and sentence building, drawing, writing, and related cutting and making should be extensions of work as begun in the first year. Girls may make small wigwams, and boys the bows and arrows in connection with the Hiawatha stories which they may read this year.

Stories: dramatic work. Robinson Crusoe stories may be told them preparatory to their reading the book the third year. The edition by the Public School Publishing Company is adapted to the third year.

Acting out some stories may be more fully done this year and the next. These children may take minor parts with third, fourth, and fifth grade children in acting stories, but some stories with characters adapted to the second grade children should be used with them. This dramatization brings out an unconscious naturalness of expression, adds to interest, voice training, and school material for special day programs. Dialogue reading where the characters have been assigned is good preparation and valuable reading drill.

Building words: voice training. More attention this year may be given to building words with letters. This stresses spelling by letter. The reading matter calls for an extension of the knowledge of phonics to include all the sounds of each letter. Careful attention should be given to articulation, modulation, and general enunciation. Many pupils do not know or use the real value of short o. A difficult vowel sound is in ask, past, and such words. It will be valuable for the teacher to make up a list of words containing this vowel sound and drill on it. The difference between the vowel sounds in rude or crude, and tube or cube, should be pointed out and a list of words made for drill.

Slovenly pronunciation, tendencies to say "goverment,"

"rithmetic," "gography," and the like, should be corrected. Phonic drills will help in all this. Slouching or careless posture should be attended to in all grades.

Harsh voices should be softened, timid voices strengthened, and musical tones encouraged. Good voice training and good oral reading should be kept in mind as desirable aims throughout all the grades.

Some good books adapted to second grade are: *Classic Stories for Little Ones* (Public School Publishing Company); *Stories of Great Americans for Little Americans* (American Book Company); *Fables and Fairy Stories* (American Book Company); *Grimm's Fairy Tales* (Ginn & Co.); *Nature Stories for Young Readers* (D. C. Heath & Co.); *Heart of Oak Reader*, I and II (D. C. Heath & Co.).

Third grade

Emphasis on silent reading. Pupils may now extend the unit from the paragraph to a combination of paragraphs and to a whole literary production. Silent reading may be directed to several paragraphs, then their content given orally, notice being taken of the order of thought in the various paragraphs.

To develop good silent reading and ready expression, the pupils must be supplied with plenty of reading matter. If there is halting and stumbling in reading, simpler matter should be used. Some of the second grade books should be used in the third, some of the third in the fourth, etc.

Ability to read alone should now be stressed, and abundance of reading matter should be at hand. Besides the adopted reader, there should be four or five other similar readers, and many interesting selections from general literature. *Robinson Crusoe*, *Swiss Family Robinson*, *Stories of American Life and Adventure* (American Book Company) *Old Stories of the East* (American Book Company), *Stories*

of Indian Children, *Adventures of a Brownie* (Education Publication Company), *Jingle Book* (The Macmillan Company), *Scudder's Verse and Prose for Beginners*, *Cinderella*, *Big People and Little People of Other Lands*, Holbrook's *Book of Nature Myths*, and many nature books may be used.

Upper grades

In the first three years children are prepared in the mechanics of reading and have come to form some tastes for the good in literature. They are ready to venture more fully into the fields of literature of all varieties. Complete classics have a place, for they develop a strong interest, present characters in life situations, and thus offer valuable opportunity for character study; the harmony of the author's full plan or plot may be seen; an epoch or age is often depicted by the whole classic; and the æsthetic or moral effect may be deeper and more permanent. Thus the footsteps of young readers may be guided into the fields of the best literature, tastes may be formed for only the good, and an appreciation of the wonders of literature may be awakened.

On the other hand, there is yet a place for the short poem or partial selection of the basal readers. A greater variety may thus be presented, a logical arrangement may be had to cover the aims to be accomplished, and better gradation or adaptation for regular lessons will be found in these readers.

In rural one-teacher schools often the fourth and fifth year pupils may be combined in one reading class, and similarly the sixth and seventh. Portions of each book should be used the first year, and other portions the next. This would avoid the wide jump from third to fifth or from fifth to seventh. If the books can be had, parts of several fourth and fifth readers should be used each year with one group, likewise parts of sixth and seventh readers with the next

higher group. Reading should still be kept up as one of the most important subjects throughout the elementary grades. The treatment of Robinson Crusoe by Miss McMurry, in the adapted book referred to in the second and third years' work, is a fine illustration of what may be done with a classic.

The following is a partial list of books to be used with these classes.

GRADES IV AND V

Hawthorne's Wonder Book. (Houghton Mifflin Company.)
Six Stories from Arabian Nights. (Houghton Mifflin Company.)
Hawthorne's Tanglewood Tales. (Houghton Mifflin Company.)
Kingsley's Greek Heroes. (Ginn & Co.)
Greek Gods, Heroes and Men. (Scott, Foresman & Co.)
Heidi, by Spyri. (Ginn & Co.)
Lives of Lincoln, Lee, Grant, Jackson.
Hart's *Colonial Children.*
Pratt's *History Stories.*
Pioneer History Stories.
Ten Boys on the Road from Long Ago Till Now.
Tales of Troy.
King of the Golden River.
Paul Dombey.

Some of these stories should be treated orally, then assigned for reading.

Country Life Readers (Silver, Burdett & Co.) and *A Country Life Reader* (Charles Scribner's Sons) are especially urged for fifth and sixth grades.

GRADES VI AND VII

By this time nearly the whole field of literature is available. Only a few books are suggested here: —

Ancient Mariner.
Miles Standish.
Sketch-Book.
Grandfather's Chair.
Birds and Bees.
Pugrim's Progress.
Stories of Waverley.
Treasure Island.
Snow-Bound.
Autobiography of Franklin.
Jungle Book.
Ivanhoe.

Lady of the Lake.
Kenilworth.
The Spy.
The Pilot.
Silas Marner.
Evangeline.
Hero Stories from American History. (Ginn & Co.)
Stories from the Bible. (Educational Publishing Company.)

Some of these, such as *Pilgrim's Progress*, may be assigned for home reading, and brought up in school for general discussion.

After a classic has been read several lines of discussion may be pointed out: —

(1) A study of the characters, the parts played by each, the motives back of their acts, comparisons.

(2) The figures of speech, allusions, and the beauties of literature found and appreciated.

(3) The historical in the narrative, wherein true, wherein not true or exaggerated.

(4) Life and other works of the author.

(5) Selections for memorizing, learned and recited.

The same line of work may be extended through the eighth year.

In addition to the regular readers, two or three complete classics may be read and studied in class each year. These may vary with the tastes and interests of the teacher and the class. If the teacher thoroughly appreciates the classic, her enthusiasm will be contagious, and she will be more likely to teach it well. Some option should be left the teacher in the selection of the classics to be thus carefully studied.

Oral reading

In the stress we have placed on literature in connection with reading, it may appear that oral reading and other phases of expression have been neglected. Silent reading to

get the thought must precede any expression to convey the thought. Then it has been mentioned that during life our reading is mostly silent interpretation. But there is a great place for oral reading in rural life and in school. How else may the teacher discover how well the pupil is entering into the thoughts and feelings of the author? And good oral reading will make more vivid the impression on the reader. It will open the way for the teacher to ask suggestive questions, to awaken and direct the thinking. The intonation, emphasis, and enunciation are all important, but these need the training of the teacher. The poetry of the ancients was written to be recited on great occasions, and its beauty would be missed without appeal through the ear. Expression of various kinds helps pupils to enter more completely into the heart of literature, and thus to bring it to pass that literature will take a greater hold on their lives. Expression through drawing, construction, oral reading, retelling the story, dialogue, and dramatization should receive attention constantly from the beginning throughout all the grades.

Importance of reading aloud. In all circles of life the ability to read aloud in a pleasing, entertaining way is a fine art to be coveted, striven for by any one. In rural life, when about the family fireside during the long winter evenings, some one to read aloud while others are busy with knitting, sewing, and other industries would be a great blessing to the whole family. Often nothing will go further to soothe and comfort a sick patient than will the gentle voice and story of the reader. A choice reader may be a blessing not alone to the family but to the whole neighborhood, and there may be many such in every neighborhood.

The human voice is rich in possibilities and it should be trained for its life work as assiduously as is the voice of the singer or the fingers of the pianist. The beginning is made through the training in phonics. In the upper grades the

vowel sounds can be developed into rounder, richer tones, and the consonants into more clear-cut, easy precision; hence this training should be kept up or revived. This may come in orthoepy and dictionary work. Enunciation, articulation, and a softening of voice tone should receive attention anew. This may well come in connection with work in expression as oral reading, story telling, lesson discussions, and dramatization. Training in vocal music always helps here.

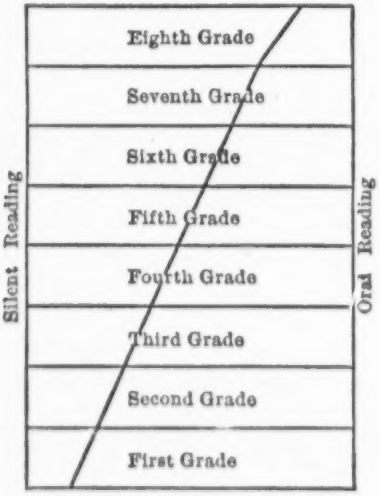

FIG. 11. DIAGRAM SHOWING COMPARISON OF AMOUNT OF ORAL AND SILENT READING ADVISABLE IN THE VARIOUS GRADES

(From Kendall and Mirick's *How to Teach the Fundamental Subjects.*)

Training in thought-getting. In addition to the voice training, there must be the training to get the thoughts preliminary to the expression. This tends to emphasize silent reading, instead of so much oral reading. As children advance through the grades the emphasis on silent reading should increase.

In the assignment of the lesson, something of the story may be given to the class. This is the time to help them with words liable to give trouble in pronunciation or meaning. In primary grades, the new and difficult words must be anticipated in previous drills. Questions and conversation prepare the mind for the thoughts to be found in the lesson to be studied. When a reading lesson has been well assigned in this way, the pupils will with zest proceed at once to the preparation.

The practice of having the pupils glance through a paragraph, then of calling one to leave his book, face the class, and tell in his own words the content of the paragraph is always good. Following this a pupil reads the paragraph as naturally as it was told.

In a similar way as the grades advance, pupils may summarize the story or thought of longer selections before these are read. Older pupils should have practice in taking the place of the teacher and reading some new story to the entire school. This story should be approved by the teacher in advance, and the pupil should give special thought to preparation for this reading. If the pupil selects the story, all the better.

Dramatization for special programs will stimulate to great interest and supply a motive for excellence. Rural children are often self-conscious, and acting will help wear this off. Such children in ordinary reading need to be immersed in the story so as to lose sight of self, and in acting they must be encouraged to throw themselves unreservedly into their parts.

Often good expression is hampered by the difficulty of the book. If a class seems to be doing poorly, try easier reading. Readers often advance too rapidly or are graded too high. Here is where the advantages of having several sets of readers will show. Easy supplementary reading may be brought in where there might seem to be the stigma of being turned back in readers.

Reading to the children. All children like to have others read to them. On some Friday afternoon, or on other convenient occasions, sometimes at the opening hour of the day, the teacher should read to the children. These occasions may be used as privileges, somewhat as holiday occasions, and they will go far toward inspiring the children to read for themselves. By careful selections, teachers can

present to pupils many of the choice bits of our English and American literature.

To form reading habits and to appreciate the qualities of good literature are aims to be daily kept in mind by the teacher. These aims accomplished and the children are not only on a high road to happiness in life, but they have tastes which will protect them against the vicious, ugly literature which will be scattered all along their pathways.

Selections for memorizing.[1] Beginning in the very first grade, children should memorize passages of great merit. This merit may be in the artistic sentiment, in the fine choice of words, or in the moral or other lesson taught. Much of the literature for young children is in poetry, and at first the poems are short. Many of these are excellent for memorizing, beginning with Mother Goose melodies. Later on the finest passages should be picked out of reading lessons and classics read, and these committed to memory. Drills should be occasionally had on these when, the whole room at attention, different children are called upon to repeat special selections, following some cue given by the teacher as to what is called for. This will be a very valuable general program. Gems of thought thus stored in mind are great sources of pleasure through life; they furnish rich food for contemplation; and they become wellsprings of culture and good influence.

The School Library

R. H.

One of the greatest of rural-school problems is the library problem. In fact this is one of the most vital of rural life problems. Rural people are not as great readers as they should be to find that companionship necessary to offset the loneliness and isolation of country life. The country people

[1] An admirable little book for this purpose is *Poems for Memorizing*, R.L.S. EE. (Houghton Mifflin Company.)

most need books. The school and the community libraries will stimulate better home libraries. No greater work can be done by a teacher for a community than to build up a good school and community library, and to build into the children the habit of reading.

The time has come for a more vigorous and persistent campaign for school libraries. Rural teachers cannot accomplish the best in the teaching of reading, nor in the general work of educating the children, without better libraries. Many country people do not appreciate reading, many do not care to spend more money on school equipment, and many schoolhouses are not in condition to receive and protect a library. These are difficulties to be attacked by the teacher.

Programs have already been urged to bring people out to the school. The school may offer good literary programs and charge a small entrance fee for each, with the understanding that the profits are to go to the library. These programs should so be planned as to be helpful in giving the children instruction in good literature, in supplying a motive for study and expression, and in bringing wholesome entertainment for all. A good short play may be the body of the program, and this may be accompanied by recitation, dialogues, songs, and other happy, amusing, artistic features. All trashy, vulgar, and crude literature should be excluded, for these programs should present models and form tastes.

The board which appropriates money should be reached and convinced that the library is such a necessary factor that money should be appropriated each year for it, just as surely as for chalk, broom, coal, or any other prime necessity. This should be done for the whole county.

The larger pupils in their manual-training work may build the necessary cases to contain the books and periodicals. These cases should lock securely. If a special room for

the library can be securely locked and barred, the cases may be open shelves.

A good rural-school library. A rural-school library should have not less than five hundred appropriate volumes. A beginning may be made with any number, however small, but with any start regular additions should be made every year. The books should be selected so as to enrich the work of the entire school. Some should be adapted to younger children, some to older, no grade being neglected. The majority of the books should be chosen for their merit as literature, though there should be books on nature, agriculture, geography, history, rural life, animals, art, or in any field of peculiar interest.

Some good periodicals are needed. Good weeklies are desirable, since these come oftener and keep the stimulus from weakening through lapse of interest. The *Youth's Companion* and the *Literary Digest* are good weeklies, and the *World's Work* and the *Review of Reviews* are good monthlies.

The periodicals when new should be kept out only over night at home, and the new books issued for one week. Some pupil can be made librarian for a specified time, then some other in turn. A blankbook may be ruled with columns to record the name of book or periodical, name of borrower, date taken, date returned, and condition when returned. Pupils may be given talks on the arrangement of books on shelves and about their general care.

During the day at school pupils should have access to the library to read during spare time, but the teacher should see that other work is not neglected for reading an interesting story book.

If the library can be enlarged so as to become a community library, certain hours of certain days should be specified for the exchange of books, and some member of the community

should be designated to assist the teacher or the school librarian during said hours.

Keeping up the library. Every now and then the teacher with a committee should go over the books, taking stock to discover losses and damages, and noting which books should be replaced for further use. The girls with needles, thread, cloth, and paste may often mend the binding, and otherwise add materially to the life of a much used volume.

The traveling libraries have already been mentioned. The larger, permanent libraries are needed, but the traveling library has some advantages in bringing a changing variety. If the larger libraries cannot be had, the traveling libraries make excellent beginnings, and they are excellent supplements to the larger libraries, especially for the introduction of new fiction and other books of the year.

QUESTIONS FOR DISCUSSION

1. Explain the use of reading as a tool subject and as an instrument of culture.
2. What the relations of literature and a library to learning to read?
3. To what extent are the people of your school community a reading people? Why are they not more so?
4. Give plans for correlating the library with the different elementary school subjects.
5. Do children first learn wholes, as tree, house, wagon, and then learn to analyze these into parts, or do they first learn parts and construct (synthesize) these into wholes? What bearing has this on the teaching of reading?
6. Contrast the "Try-another-sound" method with the method of free use of diacritic marks.
7. What are the values of good oral reading?
8. Discuss the use of dramatics in reading.
9. Make a list of ten books, your favorites, for each of the grades. Discuss this with other teachers who have favorites.
10. What difficulties in the way of getting libraries in rural schools? How overcome these? What are the pros and cons of the traveling library plan for schools?

BEST COPY AVAILABLE

BOOKS FOR TEACHERS

Briggs and Coffman, *Reading in Public Schools.* (Row, Peterson & Co.)

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Kendall and Mirick. *How to Teach the Fundamental Subjects.* (Houghton Mifflin Company.)

Klapper, Paul. *Teaching Children to Read.* (D. Appleton & Co.)

McMurry, Chas. *Special Method in Reading and Literature.* (The Macmillan Company.)

Colby, Rose. *Literature and Life in the School.* (Houghton Mifflin Company.)

McClintock, W. D. *Literature in the Elementary School.* (University of Chicago Press.)

Stevenson, R. L. *Children's Classics in Dramatic Form.* (Houghton Mifflin Company.)

182

CHAPTER X

THE ENGLISH LANGUAGE

I. Elementary Language Lessons

Qualities to be cultivated. The *Primary School* of some years ago reported the following incident: "A gentleman traveling in Schuylkill County observed some children by the roadside and a woman calling from a near-by house. He said, 'Your mother is calling you, children.' The largest child, a girl of about ten years, turned to him and said, 'Her ain't a-callin' we; us don't belong to she.'"

The girl's language was sufficient to convey the thought intended, but it would not pass as an accepted model. Unfortunately nearly all children have been exposed to such models long before entering school, and they just as readily imitate the bad form as the good. It seems that many find the inelegant the more attractive, and the wrong form, like evil, always present. Certain qualities of language must be cultivated, and of these, correctness, fluency, and taste are the first commended to the teacher. Correctness is a matter of using accepted forms, some of which were violated by the Schuylkill girl. Fluency is a quality of the ready talker or writer whose words come quickly and whose flow of language is smooth and easy. Taste refers to a choice of words and figures of speech when other correct forms might have been used. Slang is very expressive but rarely in good taste.

In general we may say that taste is cultivated through contact with ideals in literature, letters, and conversations with cultured people. Fluency comes through possession of an abundance of new ideas and an awakened desire to express

them. Correctness we arrive at through a knowledge of proper forms and practice in their use.

Importance of language for school work. The pupils necessarily begin language lessons along with reading and literature. In turn, language correlates with every other school subject. It is a vastly important school subject which has been uninteresting and unfruitful in most rural schools. Itinerant teachers, short terms, many classes, scant library facilities, little supervision are factors in poor language results in rural schools. Let us hope for remedies for all these at an early day.

In the first grade, pupils have been engaged in conversations, have had stories to tell and to act, have committed and recited memory gems, have copied and composed sentences, and have built sentences and stories with cards in desk work. This is all good language work. Yet out of the close correlation of everything in the first few weeks, some special lessons in many things must emerge. Language must be considered for itself, and after a while have its special place in the program of every grade. In the one-teacher school one period each day given to the first grade should be used for language, nature, and number correlated. Above this grade a special language period should be in the program, though language is correlated with many subjects as sources for materials.

First steps. There are two steps to keep in mind — thought-getting, and form-getting. The first is the preparatory step. Given something interesting to express, children generally bubble over with expression, so strong is their native tendency. A reason for past dullness in language work is that the children had nothing in mind to express.

There is little excuse for the pupils to have nothing to say. The rural school has exceptional advantages in the nature material at hand, with its intimate connection with indus-

tries and life. Nature and agriculture supply rich material for oral and written language. From the very first these must be used. Stories of all kinds used in reading, literature, history, nature, number, and geography become language lessons also. Pictures are of exceeding great value, contributing as they do to the development of observation, imagination, and artistic nature, and opening up a new world of enjoyment of lasting worth.

Drawing, modeling, cutting, and making are modes of expression to be freely used along with oral and written exercises.

Formal lessons. Language forms are arbitrary. They cannot be reasoned out, but must be presented as custom has fixed them, then made habitual through repeated drills in use. The emphasis of these drills should be placed on the stumbling-blocks, the incorrect forms of speech heard in the talk of the children. These incorrect forms will mostly be in the uses of certain nouns, pronouns, verbs, and contractions, and in the disagreement of subject and verb. The most common are likely to be with *I, me; is, are; was, were; has, have; saw, seen; did, done; this, that; these, those; ain't, ain't got; set, sit;* and certain plurals as *mice, feet*, etc. The teacher should keep a notebook of errors heard in play or at other times, and make opportunities for drill to correct. Questions may be asked to call forth replies using forms to be corrected. The proper forms must be presented and further opportunities offered for correct use.

At first it is not best to stop a pupil in a story or conversation to correct a bad form used. This mode of correction interferes with best expression, and tends to make the pupil over-self-conscious with strained attention on his language. Note should be made of such errors, so that at the time set aside for drill these may be brought in for practice. Drill must be persistent and tactful. Good usage must be pointed

out in the selections read. When the pupils begin to read freely, they will gradually take over the language of favorite literature; hence the wisdom of placing before them the choicest classic material.

The language books used will furnish models for study and exercises for forming proper habits, but these must be supplemented just as the regular readers are in reading. There are many most excellent language books now in use, but to limit the lessons to these will make the work lifeless.

Written forms. The forms used in writing must be the correct ones of oral speech, with additional ones coming under punctuation, capitals, spelling, letter forms, paragraphs, and margins.

1. Written work in primary grades

First year. Not a great amount of written work is demanded of children the first year. There will be a copying of sentences, short rhymes, and stories for blackboard, chart, and cards. This copying should be exact in every detail, any omission being pointed out for correction. The place of the period and question mark at the end of sentences, capital letters at the beginning of sentences and of every word in proper names, also the pronoun *I* — all need to be stressed in this year. The expression will nearly all be imitative, but toward the end of the year some opportunity to write original sentences should be given. These may be prompted by requests to write statements of what was seen on the way to school, what games are liked best, what seen in a picture, or something suggested by a poem or story.

In elliptical sentences and other drills the correct use of *is*, *are*, *was*, *were*, *come*, *came*, *saw*, *seen* can be impressed this year.

Second year. The work may be taken up with exercises of review of usages taught the first year. The written work

this year will be nearly all imitative as in the preceding year, but original statements may be extended from short sentences to a short paragraph at a time toward the end of the year.

Some sort of story or conversation work should nearly always prepare for the writing, so that the child has his material in mind for copy or for suggestions prompting originality.

Punctuation may be extended to the use of the comma after direct address, or before it if the name comes at the end of the sentence; also the comma where there are omissions, and the apostrophe with contractions and with possessive singulars.

Drills must be continued on simple word forms of common blunders. Simple letter forms can be used to advantage this year, using only simple address, — as, *Dear Uncle*, — and concluding with signature, the body of the letter to contain a few simple sentences. If the work of the school brings in any abbreviations, the punctuation of these must be observed.

Third year. The work may now become more original, but forms must first be presented for imitation. Punctuation is to be extended to the use of quotation marks and capitals with direct quotations, and to the apostrophe in possessive plurals. Attention should be called to examples of these in the readers, then practice brought in through dictation.

Letter forms now take in the address of the writer at the beginning, and letters need to be freely used to report plant or animal descriptions, stories, dictation, and other school work.

Paragraphing begins to come in for attention. Examples are to be noted in the readers. Questions or topics given as a guide to paragraphing, with instructions to begin the line properly for each answer or topic treatment, will give good

practice for beginners. Paragraphs are divisions of thought, and immature minds are incapable of much analysis of thought. Paragraphing must be handled concretely at first; originality in division is not to be expected until later.

Spelling must be watched throughout all written work.

Best specimens of written work are to be hung up, carried home to show to parents, and recalled for exhibition on special days.

2. Written work in upper grades; composition work

The textbooks for language teaching usually begin with the fourth grade, the first book planned for two years, the second book for two or three years. These books can be used to good advantage by a teacher with several grades, but even after the book comes in for use the independent lessons still have a large place, which will increase as the number of grades to the teacher decrease. A good text will present lessons bringing in all the varieties of material previously mentioned, and the second book will contain all the grammar necessary to be taught below the eighth or ninth grade.

In addition to the three qualities before mentioned, accuracy, fluency, and taste, two others come in for stress in the upper grades. These are originality and sequence, or orderly thought. Both of these have had a beginning in the third-year grade. Many topics and preparatory lessons should stimulate originality, and pupils must be encouraged to express what develops in their own minds.

Sequence. Children have a tendency to ramble. This tendency manifests itself in untrained, untutored minds, even of adults. Paragraph topics, given to teach the form of paragraphing, direct attention to thought sequence. A division of a story into parts, or stages, calling on a pupil to reproduce the first part, another the second, still another the

third, and so on until the story is completed, is a good preliminary exercise. Topics representing the stages may be put upon the board for guidance. Later on pupils may assist the teacher in selecting and arranging such topics after a story has been heard or read. Then the pupils may be given a story, essay, or composition to make their own thought divisions of it and to assign appropriate topics to the divisions.

Preparation in advance for a composition should call for an outline, or list of points, to be covered in the composition. Suppose the exercise is to consist of a description of some person: (1) The approach comes in for first consideration. Where and when was the person seen for this description? This gives a setting. (2) Physical points: size, complexion, eyes, hair. (3) Mental and social traits: disposition — cheerful, happy, genial, good-natured, friendly, popular, etc. (4) Some appropriate concluding sentences: What has he done or been?

Though the main part may consist of faithful description, variety and originality in approach and finish should be encouraged instead of the "I-take-my-pen-in-hand" style. Soon the topical outline becomes a requirement for every composition. This outline logically comes at the beginning of the composition. There should not be a multiplicity of topics to detract from the main thought divisions. Gradually a topical outline system will be learned so as to bring in subtopics, and later divisions of subtopics. These need to appear throughout the composition in the order of the outline plan.

The logical procedure in conducting recitations and guiding study in all school subjects will contribute to sequence of thought. The points in order in a lesson in history, geography, or agriculture should be called for first before a discussion of these points. Pupils need to be trained to pick

out and arrange the points as a part of the preparation of the lesson. This conduces to logical study rather than to committing to memory.

Types of compositions. In order to guide the teacher further in giving variety to the subject-matter, the following types are suggested: —

1. Narration: story, anecdote, biography.
2. Description: places, persons, animals, plants, phenomena.
3. Exposition: Debatable questions come in here.
4. Imagination: imaginary journeys, happenings, places, people, personification. This may include imaginary Narration, Exposition, Description, or a combination of these. Originality finds good play, and humor will have its opportunity in the play of the imagination.
5. Subjects for compositions: It is important to make the composition work as real as possible. The following topics are suggested as types: —

Boys

The best way to catch rats.
How to catch a frisky horse.
The hired man, and his work.
Should a boy own a dog.
How to run a Ford.
How to dam a creek.
How to make a rabbit trap.
How I raised my corn crop.
How we won the ball game.
How to keep bees.
Should a boy play marbles for keeps.

Girls

My room.
How to set the table.
How to get a good breakfast.

How to can tomatoes.
Ought boys and girls to take piano lessons.
The worst boy I ever knew.
The things I like best.
How to be happy on the farm.

Making compositions real. The compositions and letters should now treat largely the affairs of real life. This does not mean that they are to be limited to business dealings. The friendly, social letter in days gone by was often a gem of writing. Letter-writing was then a fine art. If children can correspond with other children in distant parts of the State, the Nation, or the world, and exchange compositions occasionally, they will be stimulated to great endeavor in the direction of composition as an art. Teachers may readily arrange with other teachers the plans for such correspondence. Any method of keeping the work in touch with real life will add needed zest, vitality, and inspiration.

Correction of compositions. This is a great bugbear with nearly every teacher of English. The work has been more burdensome than it should be. Pupils should be led to find more of their own errors, and some pupils may assist greatly in correcting the work of others. Teachers must read the compositions to be able to indicate the nature of the errors. A small check-mark may be made where an error appears, and the pupil must try to discover the error. Failing to do so, he must make inquiry. Better pupils may read and check the compositions of the slower ones. If a composition is very poor, the better pupil checking it may take the writer to one side, talk over the faults, and encourage him to write another to go to the teacher.

If pupils are arranged in groups for composition lessons and different topics assigned to the groups, the brighter ones may be assigned topics calling for more than is expected of the duller ones, and all kept profitably employed. Then the

better ones have the extra work of helping with the reading and correcting.

Occasionally the teacher must take time to go around the room during a composition period to observe the work at the desks. Cautions may be timely given to avoid some errors. Carelessness, untidiness, poor spelling, faulty arrangement, etc., may be pointed out for improvement. Care should be taken not to give too much assistance, yet a hint in time may prevent nine other errors, and a better habit of work may be developed.

At times some papers should be read to the class prior to any reading by the teacher, and comments called out on it as read. At other times papers selected by the teacher should be read, generally the ones showing improvement or the ones whose writers are to be encouraged to have a better paper for next time.

BOOKS FOR TEACHERS

Barnes, W. *English in the Country School.* (Row, Peterson & Co.)

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Kendall and Mirick. *How to Teach the Fundamental Subjects.* (Houghton Mifflin Company.)

Klapper, Paul. *The Teaching of English.* (D. Appleton & Co.)

Leiper, M. A., *Language Work in Elementary Schools.* (Ginn & Co.)
Excellent for rural schools.

Leonard, S. A. *English Composition as a Social Problem.* (Houghton Mifflin Company.)

II. Story-Telling

Child life has two great realms of joy, play and story, and both of these are educational factors of incalculable value. The child gives himself up to them with complete abandon, and under the spell of wholesouled interest he is deeply impressed by what goes on in his consciousness during play or

story experiences. Blind must we be to child nature and development if we go on ignoring these instruments of education or keeping them as merely incidental recreation. We must enter these realms to develop children through joyous self-expression.

For best effect stories must be told rather than read. We are never too old to listen to a good story. Many stories must be read because of circumstances, but others are to be told for their heightened effects on the listener. Every teacher should practice the art of telling stories and develop the art among children; she should also give time to a study of stories adapted to different ages of child development.

Some values. Stories call into play the imagination of the child in a most satisfying way. Nor is it the play of idle fancy, for a story may be made to stimulate thinking, stir the deepest emotions, and prompt the will to noble deeds. Stories depict life, giving the child a wide vision of good and evil at work. They enlarge the vocabulary, widen intelligence, and help greatly in character building. Through well-selected stories we teach morality and humanity far more effectively than we can preach them. Children are seldom violators of moral laws impressed through story.

Since story-telling has been favored by the ages, has been one of the earliest of childhood's crafts, and so completely takes possession of the soul of the child, it must become a potent factor in lessons for most vivid, natural expression. The story is not only a great help to oral expression, it is a help to writing, thinking, memory, character, attention, interest, and good results in every school subject.

Kinds of stories. Story-telling is a world-old art, and we have classic stories from various stages of development. Children first like the primitive stories given by a race in its childhood, and their tastes develop for stories in the order of racial development.

1. Primitive stories. These came when a people were living close to nature. Primitive man dwelt more with animals, and he believed that all nature had personality; even the stones, streams, and trees he believed to be the dwelling places of spirits of friends or enemies. Stories which thus personify nature and more especially deal with animals are early favorites, chief among which are the Uncle Remus tales of Brer Rabbit and Brer Fox. These are folk-lore stories. Rhymes and jingle stories, like these primitive ones, make their appeal to the senses.

2. Myths and legends. The myths are more mature than the simpler folk-lore tales described in the preceding paragraph. They begin to show more reflection, especially in wonder as to the origin of things. The old Norse myths and those of the American Indian are of the most wholesome types for children.

3. Fairy stories and fables. These are make-believe stories of types described, yet only believed for the moment as fancy plays. The myths and legends were believed, the fairy story just make-believed. The primitive animism is still present endowing all sorts of things and people in a supernatural way, bringing out the perpetual struggle of good with evil. Animals and plants are people masquerading, which behavior appeals strongly to childish interests.

A fable is a kind of a squeezed-down fairy story with a moral. Some fables are good, but they are so short that they lack details to make them vivid, and the moral is an appeal to reflection, hence a more mature fairy tale. Allegories, as Bunyan's *Pilgrim's Progress*, and parables, as those of the Bible, are still more mature stories of a kindred nature, yet calling for older minds to grasp the meaning.

4. Hero stories. These are myths and legends crystallized about men as great heroes. The epic stories of the ancients are illustrations. Superstitions in those days held to a belief

in all sorts of gods who could favor men in a supernatural way. The old epic tales of Greece and Rome are part history, part mythology; yet wonderfully finished, classic stories. Stories of King Arthur and his Knights of the Round Table are great favorites in this group.

5. Stories of real life. These are the stories of real heroes of history and stories of historical events. In the third year in school, if not before, the child will begin to ask for "sure-enough" stories, thus showing his maturing interests. He wants a wonder story in part, but he is interested in people who do things. Simple and interesting biography of real life really comes before the great epics. These epics appeal to minds in the adolescent stage when romance is dawning or holding sway.

Stories of adventure are of great interest to children in this period of development.

6. Romantic stories. These are the romances of life told in fiction. Not until the age of adolescence is nearly through are young people ready for the romances of the novel. These stories belong in the latter part of the high-school period and later. They have little place in the elementary school.

This brief of the kinds of stories, in order of their development, will give some idea of the stories to select for children of different ages. Older children will listen to stories for younger ones, but a story should not be beyond the years of the child, and his experiences must have been such as to enable him to comprehend the scenes, characters, etc., of the story.

Telling the stories. In telling the story, the introduction should catch the attention, and then the narrator should be assured of more than passive interest as the story proceeds. A teacher with a class should make free use of questions as the story develops. This will keep the listeners' minds active and provoke thoughtfulness. Let us suppose that the story

is *Robinson Crusoe*, and that this story has advanced to where Crusoe came to his senses after being washed ashore senseless from the shipwreck. What do you think he did first? I will tell you what he really did. He knelt and returned thanks to God for his deliverance. What would he want to find out first? How would he try to find out whether any companions escaped? Where do you think he slept that night? These are samples of questions to ask as the story moves forward, time being given to hear the children's responses before the story proceeds to answer the question and move on further for another question.

We cannot here go into details of method in telling stories. There are a few interesting manuals for this work named at the end of this topic. Rural schools have been rather shy of story telling, and it is hoped that the little here said will induce many rural teachers to take it up. Many valuable Bible stories may be told in the opening exercises of a morning. These may come from *Old Stories of the East* (American Book Company) or similar sources, and used even where the Bible is not read. For moral instruction a most excellent series of six books, *The Golden Rule Series* (Macmillan Company) gives a large collection of stories of merit graded and classified. These are excellent source books for the teacher. The playground at times may be taken over for a story hour. A story circle may be organized in upper classes, and another in the neighborhood.

Under history more will be said of stories. The point to be stressed here is, whether used for literature, history, nature, or morals, the story is an excellent bit of language material, and it has merits for its own sake as well as for all these other purposes.

BOOKS FOR TEACHERS

Bailey, C. S. *For the Story-Teller.* (Milton Bradley Company.)
Stories classified and good story programs.

Bryant, S. C. *How to Tell Stories to Children.* (Houghton Mifflin Company.)
Many stories are included. Excellent.

Cowles, J. D. *The Art of Story Telling.* (A. C. McClurg & Co.)
Includes stories and new suggestions.

Forbush, W. B. *Manual of Stories.* (American Institute of Child Life, Philadelphia.)
A complete and valuable list of stories, story-books, etc. Excellent as a manual to study.

Hall, John. *The Question as a Factor in Teaching Stories.* (Houghton Mifflin Company.)
Thorough treatment of the question method.

III. Picture Lessons

School use of pictures. Pictures are to be used as sources of language material, as art studies for the development of appreciation, and as helps in teaching many topics in geography, nature, history, and literature. The pictures chosen for language lessons should be choice products of art, then the appreciation of art may be a correlated purpose with language training, just as the appreciation of literature correlates with stories in language lessons. The appreciation aim in art ranks with this aim in literature as of great value for the development of the æsthetic nature of the child, thus opening to him new worlds of uplifting joy for life.

Pictures for language lessons. Mention was made in Part I of this book of the use of pictures on the walls of the schoolroom. We are concerned more especially here with pictures for language lessons. The ones on the wall should be studied for appreciation, and language lessons may be developed in connection with this study. But many pictures

should contribute to the life of the school, some large ones to be exhibited before the class for study, some small ones for individual use. These generally should be copies of famous pictures, and always should be artistically good. They may be found in the language books, readers, magazines, and calendars. Several houses (as The Perry Picture Company, Malden, Massachusetts) make artistic copies for sale at prices varying from one cent to seventy-five cents or higher. The one-cent and five-cent ones are excellent for individual use. For the smaller children some pictures in colors are desirable, and the ones used for study with these children should not include too many objects.

Kinds of picture lessons. The lesson may deal with mere description of what is seen in the picture; it may include the description and imaginary story told by the picture; or it may study the picture as a work of art.

Suggestions of methods. Description is the simplest, hence it comes first. The child will see isolated objects, and the teacher must lead him to relate these to the central figure. Observation should be tested by calling the children to name what they see. Through questioning, observation must be made complete and thoughtful. Relating all to a central figure will make for thoughtfulness, and a definite order of questioning will extend observation. This order might call for objects in the (1) background, (2) foreground, (3) right, (4) left, or for any similar systematic procedure of thoroughness. If there are people in the picture, after observation of objects in general, the appearance, name, acts, and character of each person may be topics for questions. Imagination may be called in to depict the past, interpret the present, and suggest the future, care being taken to call out from the children the reasons prompting their statements. There will be a tendency of the imagination to run wild, and thoughtful reasons will curb this, as will also the

development around the central figure or theme of the picture.

For the final story or description, topics or questions may at first be put on the board to direct the order and to guide in paragraphing.

Sometimes, after a large picture has been studied by the class, smaller copies of it may be given to individual members to use in writing the story. Sometimes small copies of pictures not previously studied may be given to the children to make their own study, and write the story or tell it without promptings from the teacher. This exercise will develop originality and will test the progress of the learners.

Another very valuable lesson is one using small penny pictures to illustrate a story, poem, or composition. The teacher may tell a story for reproduction, then distribute two or three related pictures to each child who is to use these, set in the margins, to illustrate his written story. A small deposit of money should be requested to cover the cost of these and other material the teacher is to supply when needed.

The teacher should have in mind the orderly development expected, and should either write out questions to be followed or topics to guide in the questioning. Secure copies of the following Perry Pictures and use in studying the illustrations: —

Illustration 1. The Pet Bird (Perry Picture No. 792)
Topics

1. Objects seen in the picture.
2. The feeling of the children for the bird.
3. The bird's feelings.
4. Why the bird is tame.
5. Value of the bird to the children.
6. Care of birds around us.

Illustration 2. The Shepherdess, LeRolle (Perry Picture No. 618)

For more advanced children. The Shepherdess, LeRolle. (Perry Picture No. 618). This is good for a wall picture, or small, individual copies may be used for the language notebooks.

Topics

What do you see in this picture? (Let the pupils name all they can see. Then question for more.)

Do you all see the man? What is he doing? What makes you think so? What is he driving? (Horse or ox? Let them discuss this fully.)

What in the background to the right? How many stacks? Are these of hay, straw, or what? Look for something very near the large stack. (See if they discern something like a man on a donkey.)

What in the background to the left? What on the ground to the left of the trees? (Log or field roller? What kind of trees?)

What time of day? How do the sheep help to answer this? What makes it appear that it rained the night before? Is it warm or cool after the rain? What does the weather promise further?

What time of year is it? (Evidences from the ploughing, the stacks, the leaves, the wool on the sheep, etc.)

Center attention on the shepherdess, eliciting comments on dress, appearance, evidences of strength, health, work, disposition, etc. What appearances of friendliness? (Note sheep in pairs.)

Note that the man is indistinct. (Is he white or black?) The horse, stacks, leaves, clouds, etc., are vague, indefinite. Which are the things in the picture which are most distinct? What the center of these? What the effect as a whole, one of hurry, bustle, noise? (The artist has made the shepherdess the center, and the effect is one of a world all at peace.)

Show LeRolle's By the River (Perry Picture No. 619). The effect is similar.

Exercises to follow

1. A description of the picture. What do you like in it?
2. A day with the shepherdess.
3. A year with the sheep.

700

These illustrations are for primary grades. As children advance they should be more fully initiated into the deeper meaning of each picture as intended by the artist. Something of the life of the artist and the nature of his pictures should be told to the pupils of the upper grades, and a brief history of art is good in the high school.

There are many pictures which are of peculiar interest for rural schools, since they depict farm life and outdoor scenes, and help to develop a fondness for the open country. The following are some artists who have given us such pictures: Landseer, Millet, Rosa Bonheur, Dupré, LeRolle, Troyon, Corot, Constable, Herring. There are others, but from these quite a list of favorites with children can be selected, some of them large ones in colors for the walls.

BOOKS FOR TEACHERS

Grover and Chutter, *Art Life Readers.* (Atkinson, Mentzer Company.)
Cyr, E. M., *Graded Art Readers.* (Ginn & Co.)
Horne and Scobey, *Stories of Great Artists.* (American Book Company.)
Hurll, E. M., *How to Show Pictures to Children.* (Houghton Mifflin Company.)

PICTURE DEALERS

Perry Picture Company, Malden, Massachusetts.
The Prang Educational Company, Chicago, New York.
G. P. Brown & Co., Beverly, Massachusetts. Some pictures one-half cent each.

IV. Grammar

Some values. Grammar is the science of language. It field is the study of the relations of words in sentences. Thes relations determine the correct forms we should use in speak ing and writing. The study of grammar should give one th ability to choose correct forms of speech. Loose, inaccurat forms are learned in childhood. As we grow older we shoul

be able to examine critically our forms of speech. The rules of grammar are the standards for measurement or criticism. One familiar with these rules should be able to reason for himself whether the expression, *between you and I and the gatepost*, is correct, and likewise with any expression to determine its propriety. It may be said that a person may become skillful in parsing and analyzing, and yet not speak grammatically. If so, such a person has gained almost nothing from the study of grammar. Here we study a science that it may guide us in the art. If one is deficient in the art of speaking correctly, that one is discounted in the business world and in social circles where people of education and culture are in the majority. This should be motive enough for an interest in grammar.

A study of the sentence grammatically should lead to its improvement rhetorically. Sentences should be well rounded, not unbalanced; closely knit together, not loose and rambling; and strong and forceful, not weak in conveying the thought. The placing of the phrases, adjectives, and adverbs will have much to do with the rhetorical values, as will also the choice of words previously referred to as good taste, a quality of expression.

Thus it may be seen that a study of parts of speech, subjects, predicates, modifiers, kinds of sentences, phrases, clauses, and agreement should be a valuable aid to all good verbal expression.

Where to be taught. Through language lessons from the first correct forms are instilled, and in composition and literature the strength, beauty, and symmetry of the sentence, the paragraph, the poem, the memory gem, or the complete classic are all matters of attention. Thus, through concrete practice the lessons aim at ideal expression. In the first three grades this work is done without a special text. The texts for language lessons are generally adapted to the fourth

and fifth grades, and the second book to the sixth and seventh grades. Some simple studies of the kinds of sentences, subjects, predicates, and parts of speech may be included in the first language text. In the second text, for upper grades, principles of grammar are scattered throughout the book. This book nearly always presents as much of technical grammar as should be given below the high school. Many of these second books are built too exclusively on the basis of grammar, rather than upon the basis of composition.

It seems that language texts must be used in the rural schools. These help in the economy of time, and they present the matter for drills on such forms as punctuation, capitalization, letter-writing, paragraphing, and grammatical forms of ordinary speech. But we wish to stress again that other language material and lessons should supplement these books along lines already discussed. These are needed for interest as well as for effectiveness. And it is largely conceded that a rigid study of English grammar should not be undertaken before the eighth-year grade, and we add that this year should preferably be in the high school. Grammar presents the logic of the language, and hence calls for maturity of reflection. A study of this kind forced prematurely upon the mind of a child kills interest and threatens with arrested development. After all, the amount of grammar that should be taught in the elementary school is small. The other work in language is the important part of elementary English. If the second language book in use contains too much technical grammar, only certain portions should be selected, and time saved for the composition, literature, story, and picture studies. All the niceties of nomenclature, complicated structure, and other difficulties of grammar should be postponed for high school study. The important things in a formal way are the correct forms of everyday speech, spelling, punctuation, letter forms, and paragraphing. These should be

thoroughly encompassed by the end of the seventh year. Then only a year of special study need be given to grammar.

Inductive-deductive method. Whenever a rule or definition is to be taught, modern practice proceeds inductively. Concrete examples are presented and comparisons lead to a generalization which, formulated, gives the rule or definition.

Illustration. Compare the following sentences, noting wherein they are different: —

1. John, close the shutters, for a storm is coming.
2. The sky is overcast with clouds, but I do not look for a rain, because the clouds are coming from the wrong direction for rain.

How many statements in each? Point out the subject and predicate of each statement? Each statement is called *a clause.* Make me a definition of *a clause.*

Which are the clauses in the following? "A tart temper mellows with age, and a sharp tongue is the only edged tool that grows keener with constant use."

When a definition or rule has been taught, it should be formulated in the language of the pupils, then restated in the language of the book when this is better, and thoroughly memorized. Repetition in drill will fix it in memory.

Diagramming. A diagram is a graphic analysis of a sentence. It is a help for many children in analysis. There are dangers in its use too extensively, though these dangers are sometimes magnified. The diagram came freely into use nearly thirty years ago, and later came a movement to discard it. It still holds a place, however, in the teaching of analysis. It is something concrete and tangible, and is more interesting to children than is verbal analysis. It emphasizes that a place must be made for every word in the sentence and the pupil sees the diagram grow until it takes in every word. The teacher should illustrate this frequently by dia-

gramming at the board sentences for the older pupils, and showing them the construction and analysis of the sentence. With satisfactory blackboard space, the teacher can also assign sentences to pupils for diagrams on the board; then she can watch them develop their sentences. There is quite an advantage in seeing the work of pupils in this way. Their habits of work are noticeable, and, if they hesitate, the teacher can detect the stumbling-block. Probably a hint will remove the trouble. A teacher can also save time by hearing some other class while waiting for the completed diagrams. With the class at attention each pupil should analyze his sentence, other pupils criticizing. If there is not enough time for the analysis of all, the teacher has the advantage of an opportunity to glance over the work later. At the next recitation, pupils may be called upon to analyze these same sentences orally without diagrams. This may gradually divorce pupils from diagrams, and enable them to give the full analysis of sentences orally.

The case is not unlike one in the teaching of arithmetic where problems may be worked out on the board or tablet and explained, or they may be solved in the mind as we do in mental arithmetic. The solution with pencil or chalk is the common one, and mental arithmetic is neglected. The reverse is true in grammar when oral analysis is insisted upon with little or no diagramming.

The writer remembers his experience when a pupil studying grammar. He became quite proficient in oral analysis, but when introduced to diagramming, there was a great revival of interest in grammar. So we say, use the diagrams, but do not fail to have oral analysis along with them.

Parsing should follow analysis. Analysis partly sorts the words for parsing and indicates much of what parsing will state.

In many rural schools too much time is given to grammar,

with very meager results. It is urged that this time be shortened, the subject limited to practical essentials, and more time given to the other phases of language.

QUESTIONS FOR DISCUSSION

1. An increasing number of educators now hold that English grammar has no place as a separate study in the elementary schools. Discuss.
2. Can you cite any case where diagramming has led to a weakening of results?
3. Outline the many correlations of language lessons.
4. What are the mechanical facts to be taught in written forms?
5. How organize to prevent children from scattering too widely in oral language of the different types?
6. Discuss *motivation* of language work.

BOOKS FOR TEACHERS

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Chubb, P. *The Teaching of English.* (The Macmillan Company.)
Has a chapter on Grammar in the Elementary School.

Kendall and Mirick. *How to Teach the Fundamental Subjects.* (Houghton Mifflin Company.)

Leiper, M. A. *Language Work in Elementary Schools.* (Ginn & Co.)
A most valuable and suggestive book. Good for rural teachers.

McMurry, Chas. *Special Method in Language.* (The Macmillan Company.)

CHAPTER XI

SPELLING

Two important tool subjects. The study of English involves two subordinate though very important tool subjects — spelling and penmanship. From the very beginning we find these necessary subordinates in the teaching of reading and all written language. Since written language is called in increasingly as we advance from the primary fields of learning, these two tools are important throughout. Their subordinate functions have led some theorists to abandon both spelling and penmanship as subjects for separate lessons. They have rejected spelling books and have selected words for spelling from reading, history, and other daily subjects. But the spelling book, after passing through this furnace of criticism, trial, and error, has been returning, though changed in its content. Spelling needs to be given some special time in the program for attention for its own sake. Penmanship has gone through similar trials to reconstruction. The same argument that would entirely relegate these to incidental teaching would eliminate also the special lessons in reading, after the primary mechanics are mastered, and reading would be taught incidentally in connection with history, geography, and other school subjects. But special lessons in reading are valuable throughout the elementary years, even though reading correlates closely with classic literature and well-written history; and we claim for spelling and the spelling book a special place in the regular schedule.

Some faults in teaching spelling. One fault in the teaching of spelling in rural schools needs to be pointed out in this

connection. Spelling has been made too much of a special and independent subject, and this has led to giving it a disproportionate amount of time as a special branch, and also to its neglect in other school subjects. The spelling books have been filled with unnecessary words, and the pupils treated for *phthisic*, *idiosyncrasy*, *incompatibility*, and other spelling monstrosities, when the diagnosis should have prompted treatment for *grammer*, *phisiology*, *amcrica*, and other simple disorders. Another rather common fault in all schools has been in the quality of teaching called forth by spelling. Some group of words is designated for the next lesson, and the method of the recitation is entirely the testing one. No thought is given to the assignment, which is supposed to be planned by the spelling book, no training in the art of studying the words, no pedagogical skill in the development of the lesson.

Needed reforms. To improve the spelling work in our schools the following reforms are needed: —

1. The word lists for spelling must be made up with greater care.
2. More attention must be given to pedagogical method in teaching spelling.
3. Pupils must be made self-helpful through the use of the dictionary.

Selection of words. A number of careful studies have been made recently to ascertain the vocabularies of children of various school ages, and the vocabularies used by adults in the business of life, to serve as guides in the selection of word lists for spelling. One of the first was made by Ayres, of the Russell Sage Foundation, and published under the title of *The Spelling Vocabularies of Personal and Business Letters*. Another was made by Cook and O'Shea, of the University of Wisconsin, authors of *The Child and His Spelling*. These authors have recently edited a spelling book along the lines

of their conclusions, based on concrete studies of vocabularies. The superintendent and teachers of New Orleans studied the vocabularies of their children, and compiled a spelling list for each grade. These lists are printed on sheets of paper, which are used as spelling books, and they make an excellent guide for the study of local words.

Small number of words needed. One of the most interesting recent studies was that made by Ayres, of the Russell Sage Foundation, to determine the most commonly used words in the English language.[1] Ayres combined the results of four studies, two based on the letters of people, one upon newspapers, and one upon selections from standard literature. In all 368,000 words, written by 2500 different persons, were used. Ayres intended originally to pick out the two thousand most commonly used words, but he found that approximately half of the 368,000 words was made up of only fifty words, and that, to obtain one thousand words, he had to include words used but forty-four times in 368,000, while to compile a list of two thousand words he would have had to include many seldom-used words. These one thousand words of Ayres, given in the Spelling Scale, constitute the best statement we now have of the one thousand foundation words of the English language, and the best test we now have of the efficiency of a class in spelling.[2]

Another study, made by Professor Jones, of the University

[1] Ayres, S. P. *Measurement of Spelling Ability.* Bulletin, Division of Education, Russell Sage Foundation (1915).

[2] The words on the Ayres Measuring Scale for Spelling one thousand in all, have been arranged in twenty-six lists, as will be seen, and the percentage which each grade of pupils should be able to spell correctly is given at the top. For example, take list L. A second-grade class should be able to spell correctly fifty per cent of these words, a third-grade class seventy-three per cent, and a seventh-grade class all of them. Perhaps it is not too much to demand that children should be so drilled on these one thousand fundamental English words that by the time they leave school they ought to be able to spell all of them correctly.

of North Dakota,[1] is also interesting. He examined 75,000 compositions written by 1050 school pupils, and got a total of 15,000,000 words. Examining these he found a total of only 4532 different words used.

The "One Hundred Spelling Demons." Jones also collected a list of the one hundred most commonly misspelled words, which he called the "One Hundred Spelling Demons of the English Language." These we reproduce below, for the information of all teachers.

which	can't	guess	they
their	sure	says	half
there	loose	having	break
separate	lose	just	buy
don't	Wednesday	doctor	again
meant	country	whether	very
business	February	believe	none
many	know	knew	week
friend	could	laid	often
some	sums	tear	whole
been	Tuesday	choose	won't
since	wear	tired	cough
used	answer	grammar	piece
always	two	minute	raise
where	too	any	ache
woman	ready	much	read
done	forty	beginning	said
hear	hour	blue	hoarse
here	trouble	though	shoes
write	among	coming	to-night
writing	busy	early	wrote
heard	built	instead	enough
does	color	easy	truly
once	making	through	sugar
would	dear	every	straight

The above one hundred words, together with the Ayres one thousand, which he uses in his revised Spelling Scale,[2] should be known by all pupils.

[1] Jones, N. Franklin, *Concrete Investigations of the Material of English Spelling*, Bulletin, University of North Dakota (1913).

[2] This scale, reproduced as Figure 12 in this book, will also be found

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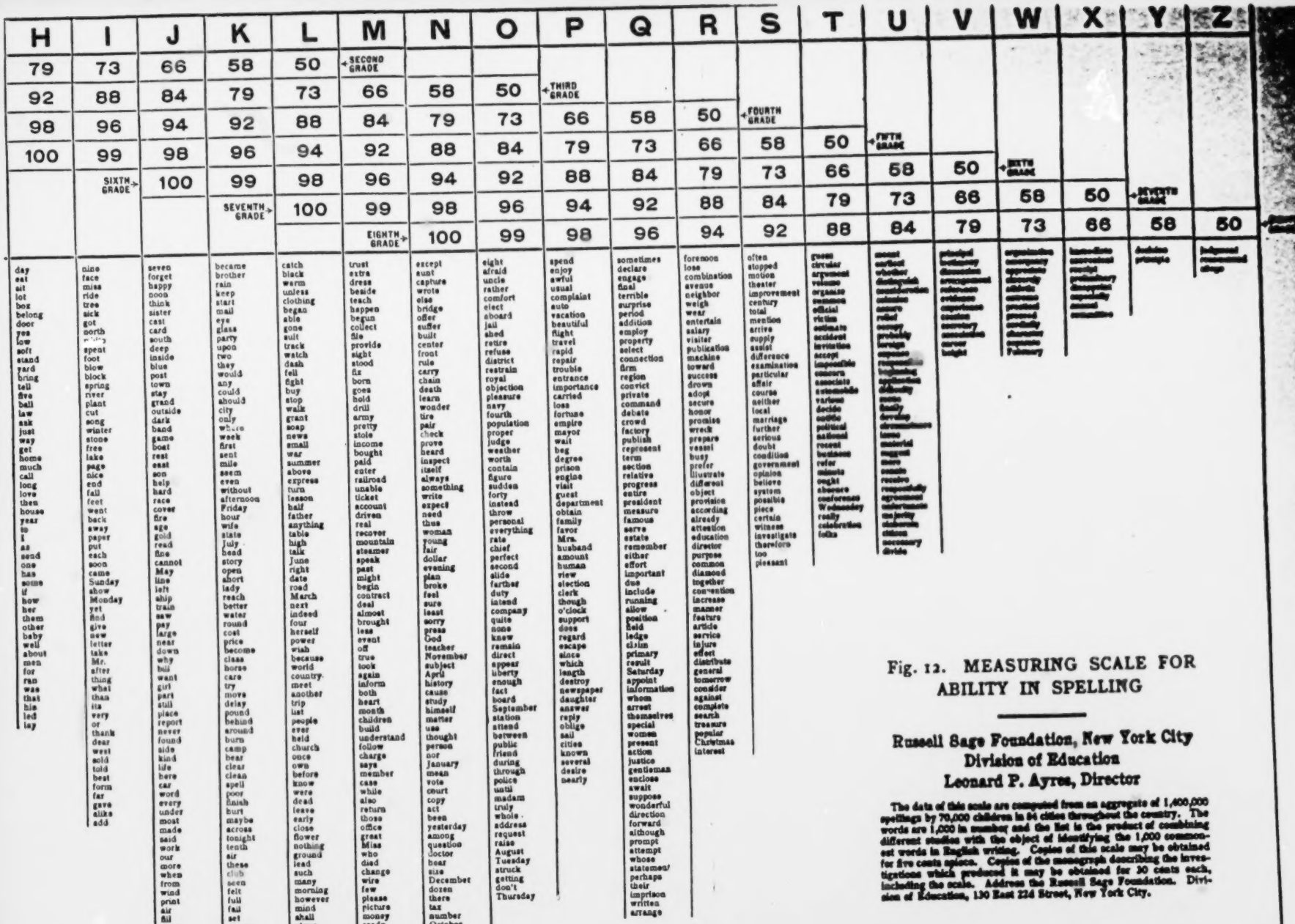
A	B	C	D	E	F	G	H	
SECOND GRADE → 99	98	96	94	92	88	84	79	7
	THIRD GRADE →	100	99	98	96	94	92	8
				FOURTH GRADE →	100	99	98	9
						FIFTH GRADE →	100	9
me do	and go at on	a it is she can see run	the in no now man ten bed top	be you will we an my up last not us am good little ago old had red	of be but this all your out time may into him today look did like six boy book	by have are had over must make school street say come hand ring live kill late let big mother three land cold hot hat child ice play sea	day eat sit lot box belong door yes low soft stand yard bring tell fro ball law ask just way get home much call long love then house year in I as send one has some if how her them other baby well about men for ran was that his led lay	nine face miss ride tree sick got north white spent foot blow block spring river plant cut song winte stone free lake page nice end fall feet west back away paper put each soon came found show kind put had give new letter take Mr. after thing what than its very or thank dear wrot sold told best form far gave alike add

All the words in each column are of approximately equal spelling difficulty. The steps in spelling difficulty from each column to the next are approximately equal steps. The numbers at the top indicate about what per cent of correct spellings may be expected among the children of the different grades. For example, if 20 words from column H are given as a spelling test it may be expected that the average score for an entire second grade spelling them will be about 79 per cent. For a third grade it should be about 92 per cent, for a fourth grade about 98 per cent, and for a fifth grade about 100 per cent.

The limits of the groups are as follows: 50 means from 46 through 54 per cent; 58 means from 55 through 62 per cent; 66 means from 63 through 69 per cent; 73 means from 70 through 76 per cent; 79 means from 77 through 81 per cent; 84 means from 82 through 86 per cent; 88 means from 87 through 90 per cent; 92 means from 91 through 93 per cent; 94 means 94 and 95 per cent; 96 means 96 and 97 per cent; while 98, 99 and 100 per cent are separate groups.

By means of these groupings a child's spelling ability may be located in terms of grades. Thus if a child were given a 20 word spelling test from the words of column G and spelled 15 words, or 75 per cent of them, correctly it would be proper to say that he showed fourth grade spelling ability. If he spelled correctly 17 words, or 85 per cent, he would show fifth grade ability, and so on.



H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
79	73	66	58	50	← SECOND GRADE													
92	88	84	79	73	66	58	50	← THIRD GRADE										
98	96	94	92	88	84	79	73	66	58	50	← FOURTH GRADE							
100	99	98	96	94	92	88	84	79	73	66	58	50	← FIFTH GRADE					
	SIXTH GRADE →	100	99	98	96	94	92	88	84	79	73	66	58	50	← SIXTH GRADE			
			SEVENTH GRADE →	100	99	98	96	94	92	88	84	79	73	66	58	50	← SEVENTH GRADE	
					EIGHTH GRADE →	100	99	98	96	94	92	88	84	79	73	66	58	50

day
eat
sit
lot
box
belong
door
yes
low
soft
stand
yard
bring
tell
five
ball
law
ask
just
way
get
home
much
call
long
love
then
house
year
to
I
as
send
one
has
some
if
how
her
them
other
baby
well
about
men
for
ran
was
that
his
led
lay

nine
face
miss
ride
tree
sick
got
north
spent
foot
blow
block
spring
river
plant
cut
song
winter
stone
free
lake
page
nice
end
fall
feet
went
back
away
paper
put
each
soon
came
Sunday
show
Monday
yet
find
give
new
letter
take
Mr.
after
thing
what
than
its
very
or
thank
dear
west
sold
told
best
form
far
gave
alike
add

seven
forget
happy
noon
think
sister
cast
card
south
deep
inside
blue
post
town
stay
grand
outside
dark
band
game
boat
rest
east
son
help
hard
race
cover
fire
age
gold
read
fine
cannot
May
line
left
ship
train
saw
pay
large
near
down
why
bill
want
girl
part
still
place
report
never
found
side
kind
life
here
car
word
every
under
most
made
said
work
our
more
when
from
wind
print
air
fill
along
lost
name
room
hope
same
glad
with
mine

became
brother
rain
keep
start
mail
eye
glass
party
upon
two
they
would
any
could
should
city
only
white
week
first
sent
mile
seem
even
without
afternoon
Friday
hour
wife
state
July
bread
story
open
short
lady
reach
better
water
round
cost
price
become
class
horse
care
try
move
delay
pound
behind
around
burn
camp
bear
clear
clean
spell
poor
finish
hurt
maybe
across
tonight
tenth
air
these
club
seen
felt
full
fall
set
stamp
light
coming
coat
night
pass
shut
easy

catch
black
warm
unless
clothing
began
able
gone
suit
track
watch
dash
fell
fight
buy
stop
walk
grant
soap
news
small
war
summer
above
express
turn
lesson
half
father
anything
table
high
talk
June
right
date
road
March
next
indeed
four
herself
power
wish
because
world
country
meet
another
trip
list
people
ever
held
church
once
own
before
know
were
dead
leave
early
close
flower
nothing
ground
lead
such
many
morning
however
mind
shall
alone
order
third
push
point
within
done
body

trust
extra
dress
beside
teach
happen
begun
collect
file
provide
sight
stood
fix
born
goes
hold
drill
army
pretty
stole
income
bought
paid
enter
railroad
unable
ticket
account
driven
real
recover
mountain
steamer
speak
past
might
begin
contract
deal
almost
brought
less
event
off
true
took
again
inform
both
heart
month
children
build
understand
follow
charge
says
member
case
while
also
return
those
office
great
Miss
who
died
change
wire
few
please
picture
money
ready
omit
anyway

except
aunt
capture
wrote
else
bridge
offer
suffer
built
center
front
rule
carry
chain
death
learn
wonder
tire
pair
check
prove
heard
inspect
itself
always
something
write
expect
need
those
woman
young
fair
dollar
evening
plan
broke
feel
sure
least
sorry
press
God
teacher
November
subject
April
history
cause
study
himself
matter
use
thought
person
nor
January
mean
vote
court
copy
act
been
yesterday
among
question
doctor
hear
size
December
dozen
there
tax
number
October
reason
fifth

eight
afraid
uncle
rather
comfort
elect
aboard
jail
shed
retire
refuse
district
restrain
royal
objection
pleasure
navy
fourth
population
proper
judge
weather
worth
contain
figure
sudden
forty
instead
throw
personal
everything
rate
chief
perfect
second
slide
farther
duty
intend
company
quite
none
know
remain
direct
appear
liberty
enough
fact
board
September
station
attend
between
public
friend
during
through
police
until
madam
truly
whole
address
request
raise
August
Tuesday
struck
getting
don't
Thursday

spend
enjoy
awful
usual
complaint
auto
vacation
beautiful
flight
travel
rapid
repair
trouble
entrance
importance
carried
loss
fortune
empire
mayor
wait
beg
degree
prison
engine
visit
guest
department
obtain
family
favor
Mrs.
husband
amount
human
view
election
clerk
though
o'clock
support
dress
regard
escape
since
which
length
destroy
newspaper
daughter
answer
reply
oblige
sail
cities
known
several
desire
nearly

sometimes
declare
engage
final
terrible
surprise
period
addition
employ
property
select
connection
firm
region
convict
private
command
debate
crowd
factory
publish
represent
term
section
relative
progress
retire
president
measure
famous
serve
estate
remember
either
effort
important
due
include
running
allow
position
hold
ledge
claim
primary
result
Saturday
appoint
information
whom
arrest
themselves
special
women
present
action
justice
gentleman
nucleus
await
suppose
wonderful
direction
forward
although
prompt
attempt
whose
statement
perhaps
their
imprison
written
arrange

forenoon
lose
combination
avenue
neighbor
weigh
wear
entertain
salary
visitor
publication
machine
toward
success
drown
adopt
secure
honor
promise
wreck
prepare
vessel
busy
prefer
illustrate
different
object
provision
according
already
attention
education
director
purpose
common
diamond
together
convention
increase
manner
feature
article
service
injure
effect
distribute
general
tomorrow
consider
against
complete
search
treasure
popular
Christmas
interest

often
stopped
motion
theater
improvement
century
total
mention
arrive
supply
assist
difference
examination
particular
affair
course
neither
local
marriage
further
serious
doubt
condition
government
opinion
believe
system
possible
piece
certain
witness
investigate
therefore
too
pleasant

guess
circular
argument
volume
organize
continue
official
victim
estimate
accident
invitation
accept
impossible
concern
associate
automobile
various
decide
saddle
political
national
recent
business
refer
minute
ought
observe
conference
Wednesday
really
celebration
folks

amount
ambassador
whether
dictionary
consideration
arrangement
subscription
evidence
apartment
caution
secretary
consolidate
cover
budget

principal
principle
discussion
organize
organization
especially
athletic
athletics
practical
proved
probably
absolutely
character
expression
February

organization
conspiracy
opposite
especially
athletic
athletics
practical
proved
probably
absolutely
character
expression
February

immediate
assessment
recital
preliminary
chemistry
separately
annual
assassinate

decision
principle

judgment
pronounced
clique

Fig. 12. MEASURING SCALE FOR ABILITY IN SPELLING

Russell Sage Foundation, New York City
Division of Education
Leonard P. Ayres, Director

The data of this scale are computed from an aggregate of 1,400,000 spellings by 70,000 children in 94 cities throughout the country. The words are 1,000 in number and the list is the product of combining different studies with the object of identifying the 1,000 commonest words in English writing. Copies of this scale may be obtained for five cents apiece. Copies of the monograph describing the investigations which produced it may be obtained for 30 cents each, including the scale. Address the Russell Sage Foundation, Division of Education, 130 East 22d Street, New York City.

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These studies indicate that the words used by educated people in general writing are less than four thousand — less than half the number usually given in a spelling book. Most people use a still smaller number. From the older spelling books certainly one half of the words may be eliminated as uncommon, the spelling of which is a sheer waste of school time.

Local vocabularies and spelling needs. The teacher should make a list of words from the children's vocabularies, in much the same manner as the list of expressions needed for drill in language forms is made. At first the ones presented must be taken from the reading lessons of blackboard, primer, and readers. Woven into these should be the vocabulary words chosen, and other words as needed in written language lessons. All of the words of the first two years will be so chosen. In rural schools the spelling book may begin with the third year. If this book is of the old type, the teacher should ask the pupils to mark certain words for study, these words to be chosen by the teacher in accordance with the standards just described, due consideration being given to needed enlargement of children's vocabularies within the limits of the ordinary vocabulary of life. Any spelling book may thus be used to advantage in rural schools, though modern texts are the best.

In any event, the spelling book is general, probably adapted to a wide area. The individual lists must supplement the spelling book by bringing in the troublesome words of common use and local words, names of local places, local history, and community industries. *Pontchartrain* is a word for a New Orleans list, but certainly not for one far away from there. *Okra* would appear in a Southern list, *Kissimmee* in a Florida list, others in characteristic local lists.

reproduced in *Educational Tests and Measurements*, by Monroe, De Voss, and Kelly — another volume in this series of textbooks.

From history, geography, and other lessons lists should be made as words appear, but not the uncommon geographical or other words of occasional need. In rural schools the particular words applicable to agriculture and rural life should enter the lists. The more carefully adapted modern spelling book will reduce the supplementary list, but such a list is always necessary.

Occasionally the pupil may be called upon to make a list for the next lesson, a list including everything needed in making a sponge cake, or in raising a boy's corn-club crop, or in raising and canning tomatoes, or names of kitchen utensils, fruits, groceries, and other lists of correlated words. The teacher can hear these lists or collect them for inspection, then select certain words for special drills.

Methods of study. It is a good plan at times to have the words assigned for the next lesson written on the board. Pupils in turn should be called upon to pronounce a word in the list, give its meaning by definition, synonym, or illustration, and use it in a sentence. Each is then to spell it. Other pupils may contribute to this study of the word. Another word is studied in the same way, and another until the list is completed. This lesson assignment will be a training lesson in studying. Volunteers may be called for to pronounce, give meaning, or use. Good sentences should be demanded in illustration of use, not mechanical, commonplace ones. Note the four things to learn of each word.

Some schools have a regulation that ten words each day are to be given for such study. If these are new words calling for unusual study, ten will be too many. Sometimes the number may be larger. Pupils may be asked to note the words they are not sure of, to observe the difficult ones for special study, and to point out just wherein each difficulty lies. All these are suggestions for methods of study. Pupils need to be shown how to study words. Assignments like the

216 BEST CO

one suggested give the pupils the opportunity to see the words, to hear them pronounced, spelled, and used. They should then copy them for study. These studies are to prepare for independent study.

No one method of general procedure should be repeated every day, for it will grow monotonous and deaden interest. Variety will help. The spelling lesson can be made and kept one of the most interesting of the school.

Better methods in teaching spelling. The discussion as to whether spelling is best taught by an incidental or a drill method has recently been pretty conclusively settled in favor of drill. Incidental spelling is too often neglected spelling and the results under drill have everywhere been shown to be the better. Sometimes the drill is almost a waste of time because of the emphasis on unused words, but it does fix the spelling if persisted in. While the drill method in itself is superior, it may still be poor, viewed from a pedagogical standpoint.

Assuming that the drill in spelling is to be intelligent drill, and that only a reasonably small number of commonly used words are to be used, there are certain psychological principles underlying drill which are important. In the first place, there must be sufficient repetition properly to fix the association of letters in the word. The repetition, too, must be attentive repetition, hence the importance of keeping the class wide awake during a spelling drill. In the third place wrong associations should be avoided by calling the attention of the pupils to errors they are very likely to make with certain words, and thus preventing their getting started wrong at the first.

Dictionary work. In pronunciation and meaning, later in derivation to enrich meaning, the dictionary is essential. It is to be the instrument of guidance in such matters in after life, and pupils need lessons in its use. They should learn to

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manipulate it with facility, to interpret readily its treatment of any word, and to form the habit of using it.

Simple work can begin with children in the fourth grade using a small primary dictionary. Some preliminary work needs to be done with the fourth grade, so that the fifth and sixth may be paired for alternation. The first work should consist of lessons with the teacher in finding words. The teacher may ask the pupils to find the first word beginning with *mam*, with *kit*, with *sil*, etc., Then words may be given them to find; then to find and pronounce, and later to discuss meanings.

We have known grown men unable to use the dictionary at the time of entering college. There is quite a jump from the ordinary word list to the dictionary, so much so that the use of the dictionary should demand special lessons. There are various meanings for the same word, preferred spellings and pronunciations, homonyms, synonyms, and derivations, all available in the dictionary. The key to pronunciation should be thoroughly learned, and practice given to applying it in finding the pronunciation, and in marking diacritically to indicate the pronunciation. This should be begun in a simple way in the fourth grade, and gradually extended through the upper grades and into the high school. Syllabication should be stressed along with dictionary work and word study.

Word study and spelling rules. In addition to dictionary use, other factors contribute to making the pupils self-helpful. One of these already discussed in part is phonics. A study of phonics should be extended in connection with dictionary work. Word study, giving attention to derivation, prefixes, and suffixes, contributes to power of interpreting meanings of new words, and spelling rules give assistance in a similar way in the spelling of many words. Modern teaching develops a few good rules inductively, but

does not burden the memory with many rules and long lists of exceptions. This work, with rules and word study, belongs in the higher elementary grades and the high school. If the elementary teacher will secure a copy of a good high-school manual treating orthography, orthoëpy, syllabication, and word study, and study it carefully, it will be of great assistance in the elementary lessons.

Written and oral spelling. The use for spelling will be in writing, hence written spelling should occupy much of the spelling time. Writing the word will aid the memory. In the lower grades written spelling should be used almost alone. Spelling is a form of memorizing — a fixing of associations — and in the early years the writing of the words is one of the best means for fixing associations.

In economy of time written spelling also makes each pupil spell many more words than oral spelling can do. Some of the best exercises for natural use of spelling are dictation lessons, wherein the words are written in sentences. Capitalization and punctuation are thus correlated best with spelling and language. A spelling-language tablet, preserving a pupil's work for some weeks, will exhibit progress and expose repetitions of errors previously corrected. Older pupils can aid the teacher with the correction of spelling papers. After a lesson is written, pupils may exchange tablets and correct for one another. The teacher should frequently inspect the papers corrected by pupils, and errors in spelling should be pointed out in every written paper the pupil prepares in school work.

Oral spelling is not to be discarded. Quick oral spelling is necessary to test oral impressions in development work. Occasional oral spelling in class will serve a good purpose, and the spelling match is yet a valuable means of bringing in wholesome emulation with group rivalry. Failure and success are quite marked in the contest. The motivation for

good spelling in the spelling match is unique. By all means have these contests for review occasions, but guard against the tendency to bring in uncommon and difficult words solely for the purpose of trapping. Only a few are made expert spellers in this way.

In oral spelling, too, great care should be exercised by the teacher to pronounce carefully and accurately. If spelling by sound is to develop good spelling habits in pupils the pronunciation must be accurate. Such misspellings as

histry	afair	Febuary
curosity	diffrence	goverment

may easily be due to inaccurate pronunciations by the teacher.

Simplified spelling. Simplified spelling has attracted much attention recently, and it is to be regretted that this reform movement is not viewed with more liberal-mindedness. Language has been a growth. It is not yet a fixed and unchangeable thing. Spelling has had and is having its evolution. When we can discover a definite tendency toward something simpler and better, we should hasten the evolution reasonably and not await the results through slow-moving custom. In the making of early dictionaries and in other ways erroneous spellings have come in, and we should correct these. The Simplified Spelling Board is an organization of scholarly men who are studying these reforms, and who have made some valuable recommendations. Human nature is such that customs become almost sacred to many people. The customary way, like the habitual way, seems the easy and right way, and prejudices of ages always favor custom. This conservatism in our natures has blinded many to reasonableness of proposed reforms. Yet even whilst we are arguing we have nearly all accepted the change in spell-

ing *program*, just as we some time ago dropped the *me* from gram*me*. We now accept *slur*, *fur*, *cur*, etc.; then why *purr* and *burr*? *Catalog*, *decalog*, and *pedagog* should shock only a *demagog*.

This reform movement is not a tendency toward "spelling as we please," nor an attempt to reduce our language entirely to a phonetic basis. Teachers can help in the campaign for simpler spelling. The rules in full, with other interesting and valuable pamphlets, may be had free from The Simplified Spelling Board, 18 Old Slip, New York City.

QUESTIONS FOR DISCUSSION

1. What points are gained through oral spelling? What through written spelling? Which is more desirable in lower grades? In upper grades?
2. In connection with which subjects can spelling best be taught?
3. Make a list of words connected with each of the following: —
   (*a*) Fishing. (*b*) Hunting. (*c*) Canning. (*d*) Gardening. (*e*) Athletics. (*f*) Nature Study. (*g*) Local geography and history.
   What other groups do you suggest?
4. Which spelling rules have been of help to you? Practice pupils in illustration of rules with words of their own choosing.
5. Make a summary of points for and against spelling reform. Write to The Simplified Spelling Board, 18 Old Slip, New York City, for free literature.
6. What are various ways of securing greater economy in learning to spell?
7. What are some good plans for directing the study of spelling and of teaching how to study it?

BOOKS FOR TEACHERS

Barnes, W. *English in Country Schools.* (Row, Peterson & Co.)

Bell, E. M. *Orthoëpy and Orthography.* (Ainsworth & Co.)
A good book treating phonics, diacritics, word study, etc.

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Cook and O'Shea. *The Child and His Spelling.* (Bobbs, Merrill Company.)

Freeman, F. N. *Psychology of the Common Branches.* (Houghton Mifflin Company.)

A good chapter on the teaching of spelling.

Kendall and Mirick. *How to teach the Fundamental Subjects.* (Houghton Mifflin Company.)

Sandwick and Bacon. *High-School Word Book.* (D. C. Heath & Co.)

Sheppe, E. S. *Word Studies.* (B. F. Johnson Company.)

For elementary grades. It includes phonics, word study, and dictionary practice in regular lessons.

Suzzallo, Henry. *The Teaching of Spelling.* (Houghton Mifflin Company.)

CHAPTER XII

PENMANSHIP

We have already stressed the point that penmanship is a subordinate too, as spelling is, yet it needs to be given special lessons for its own sake. The real test of these special lessons will be found in the penmanship used in writing other lessons, hence attention must be given to the penmanship of all written work. The penmanship lessons are to impress form ideals and to build up muscular habits to enter into all writing activities of school and life. The practical application in everyday work is the real evidence of results. Thus penmanship is not only taught in special lessons, but in all the written work of the school as well.

Qualities of good penmanship. The qualities generally stressed are legibility, beauty, rapidity, and ease. The first two are qualities of form, the second two of movement. The ideal forms must be presented by the teacher and properly visualized by the pupil. The teacher must make sure that the form is properly visualized. The movement calls for proper posture and intelligent practice until habits are fixed. Both form and movement call for special presentation and drill under the direction of a competent teacher.

Systems of penmanship. The system known as Spencerian has had wide acceptance and long usage. Among its characteristics are a slant of fifty-two degrees, certain forms for the letters, especially for the capitals, and many shadings and flourishes for beauty's sake. But cases of curvature of the spine and impaired vision seemed to be on the increase among children, and some German physicians, after investigations, charged these to unhygienic positions in school

work, more especially the positions in writing which called for a twist of the spine, of the forearm, and of the neck with unequal focusing for the two eyes. Try the old directions for Spencerian writing and test the truth of these charges.

As a result of the findings and recommendations of physicians, a system of vertical writing was inaugurated. This changed the slant of fifty-two degrees to vertical lines, to enable pupils to face the desk squarely. Writing was simplified, and bodily positions and movements made more hygienic. However, the claims for vertical writing have not been fully justified, though this system has been widely tried out in the schools. It seemed that the pendulum of reform went too far toward the other extreme, as it often does, and a reaction set in. The result does not indicate a return to the old system, but an adoption of an intermediate, moderate slant which still permits good position and movement.

There seems to be general agreement now that this system of moderate slant, good position, and simple letters is better than either the vertical or the extreme slant. A point to be emphasized is that there should be a uniform slant.

In passing, we may call attention to the confusion in the penmanship situation running through these years as something scornfully charged to fads of the pedagogues, but there has been more than fads back of it. Probably the gravest censure should come to the pedagogues because they waited for the needed reform to be forced from without, and yet the changes have been resisted more from without, somewhat as in the case of reform in spelling.

Some teaching faults. In too many schools, especially in rural schools, penmanship has been considered as a subject calling for no special preparation to teach. The prevailing method has been to require pupils to exercise in writing after copy-book models, probably with some few instructions for holding the pen. Sometimes, with the whole school writing,

the teacher would pass around to notice the work of individual pupils, but often primary pupils must recite while others practiced writing, and the teacher occasionally examined the copy-books, criticizing for blots and other signs of lack of neatness. It was a copy-book method, in which children tried to draw a model of the first copy and soon made their own line their copy. There has been less pedagogical merit in the teaching of penmanship than in the teaching of spelling, and the results have been far short of admirable.

These faults point their own corrections. It is better to use copy-slips and writing-paper than to use the old type of copy-books. If the copy-book must be used, it is better to require the pupil to write the bottom line first, then the one above and so up to the copy. The teacher need not prepare the copy-slips, though some of the best teachers do so. Yet the teacher should be able to exemplify points of the copy on the blackboard and on paper when showing pupils where they are failing. The teacher must use the blackboard freely in teaching form. The form must be presented, analyzed, and thus visualized. Attention must be called to the comparative height of the letters. In teaching any letter, capital *W* as an illustration, the direction of curvature of each stroke should be pointed out, then any failures in execution should be brought to attention. Uniform slant and spacing need to be exemplified. All this and more call for systematic preparation on the part of the teacher for each day's lessons in penmanship and for a progressive series of lessons throughout the year. If the teacher is not already a good penman, great improvement can quickly be made by a little determination and persistent practice, following the directions of some good method system. One of these which gives special attention and valuable aid to the teacher is the Palmer Method (A. N. Palmer Company, New York City). Correspondence

courses may be had from this company, and good penmanship courses are given in many state summer schools. We have seen elderly people make marvelous improvement in twenty lessons. Any teacher can learn to write well and can teach children to write well in one fifth of the time nearly wasted in penmanship in the schools.

Points on which there is general agreement. While different systems for the teaching of penmanship differ on some points, it may be said that there is now general agreement on the following fundamental points, which we take from the excellent work by Kendall and Mirick: —

1. In judging the penmanship of pupils the method of writing — that is, penholding, movement, ease, and speed — should be considered, as well as legibility, and beauty of line and form.
2. A moderate slant is better than vertical writing, or than an extreme slant. Uniformity of slant is more important than conformity to any particular degree of slant.
3. A method of writing by which the arm muscles are used for the fundamental movements, with the fingers acting as assistants, is productive of better results than a method that makes use of the fingers alone.
4. Copying is not a good method of teaching penmanship. There should be systematic instruction in word and letter forms, in penholding and movement, followed by practice.
5. To establish desirable habits in writing, the instruction given in penmanship lessons must be applied not simply in those lessons but at all times in all written work.
6. The forms written by young children should be large.
7. The teacher should herself practice a correct method of writing. If she does not exemplify the methods she is teaching, pupils have little reason for adopting them.
8. A well-graded series of copy-books or copy-slips is desirable as a guide for teacher and pupils.
9. The individuality of pupils should be respected in teaching penmanship, as in teaching other subjects.[1]

[1] Kendall and Mirick. *How to teach the Fundamental Subjects*, pp. 145–46.

Some method suggestions

Pen and pencil. There is no agreement as yet as to whether first-year children shall begin with pencil or pen, though the pencil is being used more and more generally in the first grade. In rural schools with several grades to the teacher, we prefer to have beginners use a soft pencil for desk writing. They can care for a pencil easier than for pen and ink, and the problem of distribution is simplified. The transfer to the pen may be made the second year. The first-year pupils should be given much practice in writing on the board, for the study of form. The movement should be of the whole-arm in blackboard writing, never just the finger movement. But proper desk position, pencil holding, and movement must have some attention, though the writing is largely copying of words used in the reading-lessons and simple language lessons, and the emphasis is on form the first two years.

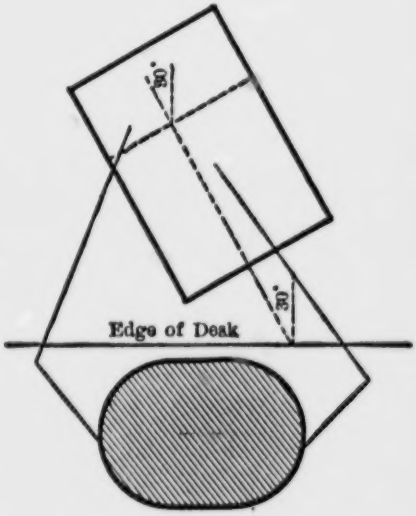

FIG. 13. DIAGRAM SHOWING PROPER POSITION OF BODY AND PAPER, WITH REFERENCE TO THE DESK

(From Freeman's *Psychology of the Common Branches.*)

Position, penholding, and movement. These call for first attention in regular penmanship lessons.

Pupils should face the desk squarely, place the feet flat on the floor and slightly forward so as to brace the body, incline the body only very

slightly forward with shoulders never stooping, rest the forearms on the desk, and thus sit at ease. The constant caution to the children must be to relax, never to hold a tense position of body, hand, arm, or fingers, and certainly never grasp the tongue between the teeth.

If the surface of the desk is not large enough to rest both forearms, the right side may be slightly turned to the desk, but never to the extent of the old position condemned, nor to permit the resting of the weight of the body on the right arm.

The arm should rest on the large, fleshy muscle of the forearm, so as to admit a forward and backward motion on that muscle. The right hand should rest on the nails of the little finger and the one next to it, or of the little finger alone. The wrist and the side of the hand should not rest on the desk. This latter point is very important if the finger movement is ever to be prevented as the chief movement. The position described is for the muscular movement, supplemented slightly by finger movement. The left hand may rest palm downward where the top of the sheet of paper should be. Then the pupils are to practice for a minute or two the movement of the forearm on the muscle and finger nails. After this the paper is to be put in place so that the line of writing is at right angles to the forearm, and the left hand should place the pen in proper position in the right hand. Practice of the movement should follow for a minute or two without the pen touching the paper, and with strict attention to position and relaxation. Pupils are not to grasp the pen tightly. Dipping the pen in ink, this movement is to be continued, the pen making up and down lines close together, of proper slant, about twice as high as capital letters, and without removing the pen from the paper. This practice may first be to the count of 1–2, 1–2, etc., speeding up. Then as the pupils keep up the practice the teacher should inspect position, pen, and movement, trying if she can move her pen staff, or pencil

freely under the wrists. This practice should be the day's lesson, to be renewed the next day, when additional practice of the same kind is taken up with the pen going round and round an oval. Drill on the up and down lines and the oval lines may establish position and movement fairly well, but vigilant practice for days will be necessary to make them habitual.

Form and movement. The pupils are then ready to study form and execute it with movement. The first half of a small *n* — that is, the up curve and down straight line, of large size — is good for the unit of practice, this unit to be repeated across the page several times. Pupils are to be kept strictly to position and movement all the while. By drawing longer lines through the straight, down strokes of the pupil's writing in this last exercise, the slant and spacing may be shown and criticized. The first two strokes of a small *i* will be a good unit for another practice, all the previous units brought in along with newer ones. The oval may be extended into a spiral. After a few days of such practice, self-control may enable the practice to reduce the size of units to that of ordinary letters.

By due diligence and rigid supervision on the part of the teacher, the proper mechanics of form and movement may be mastered.

The different letters must be taken up one by one, explained from the board, and practiced upon as units, then as combinations. The form must be seen, and practice must continue rigidly. Quite soon the teacher who goes enthusiastically into this will find pupils making rapid progress. All details of penholding, movement exercises, etc., have not been attempted in this presentation. Only some essentials have been presented to indicate a most successful method. Instruction in details may be found along with the system adopted for use.

Other suggestions. It may be best not to begin this rigid practice until the third year, when the third-fourth and fifth-sixth grades may be organized into two classes. By the end of the sixth year the penmanship should be nearly perfect for one half of the pupils, and quite good for all.

Correct position and movement must be insisted upon in all written exercises. The special lessons should function in all written work.

Practice should develop speed, ease, and good form. Speed and quality should progress together. After the pupil has developed form, his writing should become automatic. Counting may regulate speed. Matter given to copy may serve as original tests. Twelve to fifteen lines of ordinary print on the regulation page of a book should be reproduced in script in ten minutes. Start pupils on the copy, then stop and collect at the end of the time. This will show what they are doing.

Get a loose-leaf notebook, not large, or use sheets of the regular school paper. Have each pupil write something on a page sheet when the first lessons begin. At the end of each month distribute other pages for specimens of their writing. These pages put together will indicate progress and serve as stimuli.

Interest and enthusiasm on the part of the teacher, free use of the blackboard, frequent tests for speed, form, slant, spacing, and an honor roll of progress will help keep up life in the penmanship lessons. Making booklets of specimens of work in nature, language, and other classes for exhibition will stimulate to neatness and excellence in penmanship.

In the seventh and eighth grades, the work may center in social and business letters and papers, with much practice on unruled paper.

Stimulus of a writing scale. Every teacher should have, hung up in the room, one of the standard writing scales which have recently been evolved. The Ayres Scale or the Thorn-

dike Scale are the two most commonly used and the most desirable. These are easily obtained, and are inexpensive.[1] The Ayres Scale reproduces samples graded from 20 to 90, and the Thorndike Scale uses gradings from 4 to 18. Number 40 on the Ayres Scale and number 9 on the Thorndike Scale are practically equivalent. The Thorndike Scale was based on the beauty, legibility, and general merit of the writing, while the Ayres Scale was based on legibility alone, but gives samples of vertical, semi-slant, and full-slant writing for each number on the scale. With these standard charts hung up in the schoolroom the pupils can compare their writing with the samples on the charts and determine their rating or proficiency. One of the best features of these scales is that of their uniformity. A grade of 80 per cent in writing means nothing to a teacher in another school; a score or standard of 80 on an Ayres writing scale or an equivalent rating on a Thorndike Scale has the same meaning all over the United States, and is a measure which all familiar with the use of these scales understand. The writing of all of the schools of a county may now be compared with ease.

Standards which ought to be attained. That teachers may know what grades pupils in the different school grades should attain, and the equivalent meaning of the two scales, the following table is introduced to show the quality and speed which ought to be reached by the pupils of each school grade: —

Translated, this means that an average fifth-grade pupil should be able to write, by the close of the year, sixty-five letters per minute and of a quality of fifty-five on the Ayres Scale or of 10.75 on the Thorndike Scale.

[1] The Thorndike Scale is for sale by the Bureau of Publications, Teachers College, Columbia University, New York City, and the price, by mail, is eight cents each. Ask for "Scale for Grades 5 to 8."

The Ayres Scale is for sale by the Division of Education, Russell Sage Foundation, New York City, and sells for the same price.

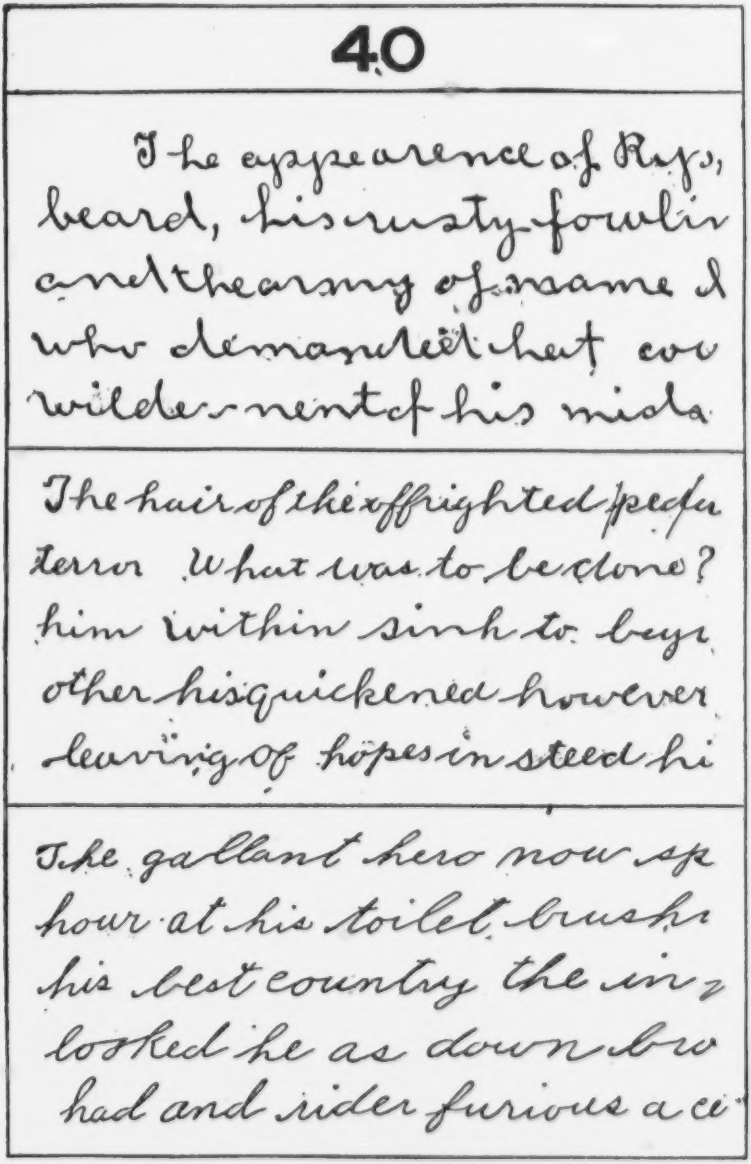
40
The appearence of Rip,
beard, his rusty fowlin
and the army of name
who demanded that cur
wilderment of his mind
The hair of the affrighted pede
terror What was to be done?
him within sink to beg
other his quickened however
leaving of hopes in steed hi
The gallant hero now sp
hour at his toilet brush
his best country the in
looked he as down bro
had and rider furious a ce

FIG. 14. ONE SECTION FROM THE AYRES HANDWRITING SCALE (Slightly reduced in size.) This is the equivalent in ability to write to No. 9 of the Thorndike Scale.

Quality 11.

John vanished behind the
bushes and the carriage
moved along down the
driveway. The audience

driveway. The audience of passers-by, which
had been gathering about them melted away
in an instant leaving only a poor old lady on
the curb. Albert was sadly sticking

Quality 9.

Then the carelessly dressed gentlemen
stepped lightly into Warren's carriage and
held out a small card, John vanished behind the

by which had been gathering about them melt-
ed away in an instant leaving only a poor
old lady on the curb. Albert was sadly

Then the carelessly dressed gentleman
stepped lightly into Warren's carriage moved
and held out a small card, John vanished

Quality 8.

moved along down the driveway. The
audience of passers-by which had
been
gathering about them melted away.

Then the carelessly gentleman step
ped lightly into Warrens carraige and
held out a small card, John vanished be-
hind the bushes and the carraige moved

FIG. 15. ONE SECTION FROM THE THORNDIKE WRITING SCALE

(Reduced one half in size.) Quality 9 of this scale is approximately equal to quality 40 of the Ayres Scale reproduced on the opposite page.

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	School Grade						
	II	*III*	*IV*	*V*	*VI*	*VII*	*VIII*
Ayres Scale	44	47	50	55	59	64	70
Thorndike Scale	9.36	9.75	10.13	10.76	11.34	11.89	12.66
Letters per minute	36	48	56	65	72	80	90

Some pupils will be found to write faster and some slower than this, and some better and some not so well. By marking each pupil on both speed and quality it will be easy to pick out the pupils who need speed practice, and those who need quality practice.

QUESTIONS FOR DISCUSSION

1. In teaching penmanship, what are the different points to be taught? In what order should these be presented?
2. Why should younger children at first have larger script for copy?
3. What uses should be made of the blackboard in teaching writing?
4. Discuss the changes in penmanship systems and the causes thereof, noting especially changes in position, movement, slant, form, pen-holding, etc.
5. What are the drawbacks of the old copy-book method? What is better?
6. Why are there so few good teachers of penmanship? Is it a difficult art? What opportunities now afforded teachers to improve in this subject?
7. What is a writing scale? Use the ones discussed to diagnose your own handwriting. Help pupils to locate theirs in these scales, then to work upwards.

BOOKS FOR TEACHERS

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Freeman, F. N. *The Teaching of Handwriting.* (Houghton Mifflin Company.)

Freeman, F. N. *Psychology of the Common Branches.* (Houghton Mifflin Company.)

Kendall and Mirick. *How to teach the Fundamental Subjects.* (Houghton Mifflin Company.)

CHAPTER XIII

HISTORY AND CIVICS

In the development given to reading, language, literature, grammar, spelling, and penmanship, it may be seen what correlation means. Not one of these subjects can say to another, "I have no need of thee." In the fields of literature and story we meet with correlated history, and geography is closely interwoven with history. Only as we advance in the grades do the subjects begin to come apart for extensive specialized study of each. History is most highly specialized in college and university courses, yet it has its beginnings in the primary school, beginnings which may determine in the interests of the child what history is to mean in his later studies and in his life. History is story, and in the first two or three years of school it enters as an integral part of the general story program for language material and for the satisfaction of the instinctive interests of child nature.

The point of view. In its broadest sense, history is the story of the life of mankind. In a more special sense it is the story of those famous peoples whose actions have affected civilization. It had its beginning in the primitive, shadowy past, and the conclusion is not yet. It is a great continued story. What is the essence of this story?

Years ago Herbert Spencer pointed out a mistaken or narrow point of view of history as composed of wars, schemes of monarchs, and the failures or successes of political parties. He asserted that it should be more the natural history of society, which would make its central theme the wider social aspects of the life of any people. It is thus a story of progress, of the inner life of the people, of the victo-

ries of peace, which greatly surpass those of war. This modern viewpoint of history should change the emphasis of both teacher and textbook maker, and yet, though this doctrine has been gaining ground for years, examinations into actual practices disclose that political history still has a monopoly in the schools. The story of the progress of the American people is essentially one of the evolution of the social and industrial life. The American frontier was at first colonial, then it crossed the Alleghenies, it shifted to the Mississippi, it passed into the West, and it has not yet disappeared. Cities have sprung up in its wake and vast industries have multiplied. Hills and valleys passed over by it now teem with happy, prosperous, enlightened people. Our frontiersmen were our troubadours and knights, and frontier life was primitive life, though somewhat advanced from the life of primitive cave men, the tree dwellers, and the inhabitants of our cliffs. The study of our shifting frontier life and the evolution of social and industrial America will carry with it the explanation of why we are naturally and inevitably a democratic people. With us the shifting of the emphasis from wars and politics to the social life of the people should be popular, and should gain more rapidly in our teaching of history.

Fact history and human history. One other shifting point of view must be noted. There are two sets of facts in history, the one made up of dates, happenings, and passing events; the other of thoughts and feelings, of which the first facts were the mere outgrowth. Events constitute the outer form of history, while the thoughts and feelings which are the causes lying behind the events constitute the real essence or content. Events may begin and end, and thus become a matter of record, but ideas live on in results. The emphasis in history should not be placed upon facts, dates, or events, but focused upon the real essence in cause and effect. Too

often the textbook and the lesson are but masses of detail, and memory-cramming prevails without vital connections or discriminations between the vital and the incidental. This kills both interest and good method. Furthermore, some events or series of events may profoundly influence the life of a people, and other events are transient in effect, influencing very slightly the subsequent history of the country. Textbooks have given but little help in the selection of the important phases for emphasis, and this selection on the part of the teacher is a great factor in genuine teaching. The day of indiscriminate cramming of dates and facts is passing out as an aim in history teaching. With such an aim prevalent, no wonder that history was entirely omitted in the past in many country schools.

Summary as to purpose. The influential events in the life of the people must be selected for emphasis, and their influences traced to subsequent results. The real development of the life of the people should be given greater place than wars and politics. Reviews and examinations should center in these essential factors, and the dates, facts, incidents should be used only as needed to connect up the main issues and to vitalize the story. This would give continuity to history through causal relations between the larger issues, and such is *rational* history. Limited to dates, facts, etc., is *factual* history. History teaching should stress the rational and social, more than the factual and political.

I. Primary History

Early beginnings. History should be employed early in the education of children. Instinctively all children delight in story. This innate tendency, like many others, may ripen at a certain age, and then gradually fade if not fixed through use. The chances are ten to one that if a boy grows up

alone through the age of games and sports, without indulging in marbles, ball, and the like, he will lead a selfish, secluded life. Dr. James says: "In all pedagogy the great thing is to strike the iron while hot, and to seize the wave of the pupil's interest in each successive subject before its ebb has come, so that a headway of interest may be secured on which afterward the individual may float." [1] The story interest, then, must be utilized in the beginning of history, and extended and built upon so that this interest may run throughout history. Story work is the necessary beginning of history, and should not be omitted in the lower grades. The practice in many rural schools of deferring history until the advanced grades, where a comprehensive text is used, has made of history for many children a dull, dry study. The headway of interest was not acquired in due time. History should begin with the natural interests of the child, and keep pace with his development to maturity.

Kinds of historical stories. Stories may be of persons — biographical, or of events — narrative. Under each of these types the story may be real or imaginary. Hence a story may be of a real or an imaginary person, or of a real or imaginary event.

William Tell impersonates the spirit of liberty that dwelt in the hardy Swiss mountaineers. Love of freedom and disdain of tyranny are general lessons drawn from this story and perhaps planted in the character of the child. But the William Tell of this story was not a real historical person, only imaginary.

The Indians fought the early white settlers, yet did not often do so when justly and kindly treated — the story of William Penn, a real historical person.

We were at first loyal to England, but when our rights were invaded and taxes levied without consulting us, we re-

[1] James, William. *Briefer Psychology*, p. 404.

sisted English authority — the story of the Boston Tea-Party, a story of a real historical event.

The young are more interested in persons than in events. The imaginary person, especially if a boy or a girl, may be the center of a story nearer the child's own experience than any account of the full-grown man or woman of history. Questions may thus be brought to the child's own level. The logical order of introduction seems to be the imaginary, the real person, the real event.

Stories of primitive life. The fable and fairy stories, the myths, legends, and folk-lore stories involve the beginnings of history. These are introductory to history. Primitive stories, fairy, and folk-lore stories are used in the first grade. The Hiawatha stories and stories of Indian life may be begun in this year and continued in the second, when the *Hiawatha Primer* may be used as a supplementary reader.

Stories of primitive life fit in with the interests of second- and third-year children. The life of the cave men may be given in *The Story of Ab* by Waterloo, or *The Early Cave Man* by Dopp, or *The Cave Twins*, by Mrs. Perkins. How names were first given, the introduction of fire, the pit as the first trap, invention of bow and arrows, domestication of animals, first games, and early industries and art, are all woven into the story of Ab and his companion. Lake-dwellers and cliff-dwellers may be the next subjects of story. The cliff-dwellers bring the story to America and advance the development of man to the agricultural stage, for these cliff-dwellers were an agricultural and hunting people.

In Jane Andrew's *Ten Boys on the Road from Long Ago till Now*, the story of Kablu, the Aryan lad, comes next in the order of development. We are of Aryan descent, and can find in this story the beginnings of many of our ideals. This is a story of shepherd life, of bronze metal, of letters to take the place of picture-writing, of advances in home life and

moral virtues. The next of the ten boys, omitting the Greek and the Roman, is Wulf the Saxon, who is a step nearer kin to us and still farther advanced in home life, community life, use of clothing, travel, sports, and letters. These stories are all rich in opportunity for dramatization.

Robinson Crusoe (Public School Publishing Company's edition) may be treated orally with second-grade children, as oral language work, and used as a reader in the third grade. This story is intermediate between the fairy story and real history. It is an imaginary story, yet Crusoe has to solve his difficulties as in ordinary life, for no good fairy comes to his rescue. This quality makes the story fit the earlier grades rather than the fifth or sixth, where the full book in the original may be read. The possibilities and the treatment of this story are well presented in a teacher's edition.

The primitive life of the Eskimo is told in Schwatka's *Children of the Cold* (Educational Publishing Company) and in Mrs. Perkins's *The Eskimo Twins* (Houghton Mifflin Company). Baldwin's *Old Stories of the East* (American Book Company) are superb stories of the old Bible days.

Stories of child life in many lands may be used in the third year, making a beginning in geography also. Especially is it valuable to describe life in those parts of the world yet in primitive stages.

Thus it may be seen that the field is rich in material from which to select. This field should be kept in mind in selecting books for the library. In connection with reading and literature, these stories will build the foundation for history, and will make the boy and the girl interested readers in a charming realm. The library is as essential here as in reading, and without good books in a school library the teacher of history is crippled and children are robbed of a most valuable birthright.

Stories from real history. In following the natural inter-

ests of children we are led to propose the imaginary stories of primitive life. We know that such people as the cave men and the lake-dwellers lived in prehistoric times. We have discovered relics of them, their implements, and their art. The earth discloses many things about the contemporary animals and climate, and gives us an idea of how many thousands of years ago these primitive people lived. The stories, therefore, are built around well-known data, and are not merely imaginary guesses at the riddle of existence.

In the third school year stories of real persons will begin to be in demand. Children are beginning here to be fond of adventure and to admire heroes. Local history should receive early attention. Nearly every locality has its romantic legends and its adventurous history of pioneer or other days. These have peculiar charm, which will be intensified if some participant or old inhabitant can be brought to the school to tell the tales, and if any ruins or such material evidences can be visited.

The old viking tales of early sea adventures, stories of the Phœnician sailors, and old Norse stories lead up to the story of Columbus. If a good globe can be had, eight or ten inches in diameter, the oceans may be pointed out and voyages traced. This is an excellent opportunity to introduce the children to the globe. The countries mentioned should be pointed out. This connects up with the stories of child life in other lands. The interest in the people will add interest to the geographical lessons incidentally brought in. Norway, India, Italy, Spain, Persia, Germany, and Eskimo land are all involved in the many stories already suggested. Japan and China furnish interesting stories of peculiar and fascinating life.

Introducing the real historical personage. Though the real historical personage is now gradually introduced, imaginary persons and events are not dropped out. *Swiss Family Rob-*

inson follows *Robinson Crusoe* as a most worthy successor in the interests of children. At the same time, however, stories to illustrate the history of the locality, the State, and the United States should be planned for systematic introduction. The exact order of treatment must be modified by conditions, such as the material at the disposal of the teacher and the extent of alternation. It may be necessary to alternate the third and fourth grades in one group, the fifth and sixth in a second group, and the seventh and eighth in a third group. The fairy stories, legends, and tales of most primitive people may then be assigned to the first and second grades as a group, but extended and reviewed in the next group. The two highest grades of the elementary school should be given a logical organization of the history of the United States and civics presented through the use of textbooks.

Selection of stories. A few things may serve to guide in the selection of stories.

1. The story should be interesting.
2. It should deal with some important part of history.
3. All the important periods of the history of our country — exploration and settlement, colonial, revolutionary, and national — should be represented in the total selection.

Subjects chosen to illustrate the spirit of adventure abroad in the world and the problems of the times of the discovery and exploration of America include Richard I, Marco Polo, Columbus, Magellan, Cortez, De Soto, Hudson, Drake, Raleigh, John Smith, La Salle, and Champlain. These lay the foundation claims to territory of the Spanish, English, Dutch, and French.

Then comes the field of colonial and pioneer life, which is rich, fruitful, and inviting. How boys and girls lived in that far-off time, what their food, what sort of clothing for body

and feet, the nature of the houses, windows, and furnishings, what plays and pleasures, what books, schools and churches, and how children helped to make a living. Following somewhat the idea of *Ten Boys*, there is the little Virginian, the little Puritan, the little Quaker, the Oglethorpe Boy of Georgia, the French Girl of Quebec, the Creole of Old New Orleans, the Ramona of California, and Pioneer Children of Kentucky, Missouri, Colorado, and Utah. These are typical subjects for original stories. The story of Daniel Boone is a typical pioneer story; so is that of George Rogers Clark.

Value of biography. Biography should predominate throughout the lower grades, but history through biography is apt to make the great man stand out too much apart from ordinary men; then the rational connections may not be set up to hang all together. Interesting stories of leading events find place, such as the Pequot War, the Charter Oak, the Boston Tea-Party, and later the Battle of Lexington, the Declaration of Independence, Finding Gold in California, the Mormon Journey to Salt Lake, and the Expedition of Lewis and Clarke.

Biographies chosen from the Revolutionary period should be those of Washington, Franklin, John Paul Jones, John Morris, Lafayette, etc. Typical Presidents may be Washington, Jefferson, J. Q. Adams, Lincoln, Garfield, — men whose lives are inspiring. In the Civil War period Lee, Grant, Sheridan, and Jackson furnish stories of great worth. These can be used without any bias of the provincial partisan. Fulton, Whitney, and others represent industrial progress.

Many others may be chosen to advantage. These are mentioned as types to illustrate a plan of selection. At the close of the chapter a list of sources for such stories is given.

A primary textbook of state history and one of United States history may be used as early as the fourth or fifth grade. Such a book should be one of excellent literary merit,

its style adapted to these primary grades, and its stories well-chosen biographies with some events combined. These books will be of assistance where a teacher has several grades and the library facilities are scant. The books should be generously supplemented with other stories. Stories from Greece, Rome, and England are adaptable here.

Even though the library facilities are scant, do not banish this phase of school work. Give it greater place in the program. Secure a small collection of source books for stories, and add to this collection gradually as a part of your personal equipment. Use these to stimulate and to extend the story interest throughout history, and, in character, to build more stately mansions.

Story treatment. The history story may be treated as suggested for other stories under language. Comments of approval and disapproval of characters and acts should be encouraged. Topical outlines may be made out for the pupils to copy in notebooks, to serve as guides in review and in reproduction.

Stories should be told, oftener than read, to the pupils. Such treatment makes them more realistic, and the conversations as the stories proceed make for effectiveness and thoughtfulness.

Pictures may be used to great advantage in introducing and in supplementing stories. Such pictures as Three Ships of Columbus, Pocohontas Saving the Life of Captain John Smith, the Boston Tea-Party, the Liberty Bell, and others may be collected from magazines and other sources, or may be purchased from the Perry Picture Company, of Malden, Massachusetts, for a few pennies only. Conversations may start about the pictures and lead to the stories. Small pictures and drawings of the pupils' own invention may illustrate the written reproduction.

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II. Advanced History

The book phase. Textbooks in history are often not used until the upper two grades of the elementary school. This may well be the case in schools where teachers have ample time to give history full oral treatment in the lower grades. It is a mistake, though, in the rural schools to postpone all history to the book phase of the upper two years. These upper years are the ones for the use of a textbook to organize the field of history in the minds of the children. The texts for this purpose are brief, condensed, generalized, and abstract, and not such as will build real interests in history. As we have pointed out, these interests are first primitive and biographical, and they need early attention.

To make the early history effective needs an abundance of graphic details to make it lifelike and full of interest. This cannot be accomplished in a brief text which attempts to be comprehensive. The story plan permits of this, and it can early interest children to read many books for themselves before they reach the upper two grades, and the headway of interest will prompt them to read more during these two years. McMurry, in his *Special Method in History*, insists that only a few subjects should be chosen for each year, and these developed fully. Charters, in his *Teaching the Common Branches*, has this to say: "If I were an historian and wanted to write a text on American history which would make the children love the subject, I should make it one thousand pages instead of three hundred. Instead of packing it with facts, I should select a few such movements and events, and I should write all the interesting stories centering about them I could find." I most heartily commend the wisdom of both these points, except that the one thousand-page book might be a little unwieldy. It would admirably fit the rural schools practicing alternation to have such a book divided into two

books, one treating American history up to Washington's Administration, the second treating the period under the Constitution. This division is recommended for the upper two grades, with civics added to the constitutional period for some systematic summary.

The text and its use. Since the concrete matter cannot all be in the textbook, the thing to do is to supplement the book as fully as possible. As has been previously stated, primary texts may be used with correlated story books to help out an overworked teacher in presenting stories of the State and the United States. These primary texts should be largely biographical, and centered around a few well-chosen biographies and events. Biography should develop toward events which involve movements inspired and led by the principal figure. Such will be the stories of Miles Standish, Lewis and Clarke, Thomas Jefferson, and Abraham Lincoln.

With the advanced textbook the teacher should select the strategic events and movements, and cluster others around these. A full development of the most important phases will be worth far more than an attempt to make a brief mention of so many events and people.

Teaching children to memorize the language of the book, dry dates, and a bare record of events, is the best means to induce weakness, to disgust pupils, and to make history unpleasant. The most fruitful method is the topical, together with its modification, — the epoch or period method.

Advantages of a topical method. Among the advantages of the use of a topical method are the following: —

1. It enables the teacher to bring in material outside the book, to enlarge and vivify the instruction. It also enables the teacher to select from the text, and omit certain topics for a fuller treatment of leading topics. It will impress pupils that not all history is in the textbook, and even what is in there may at times be omitted.

2. The topical method encourages pupils to study and to think for themselves, to trace ideas and to compare statements.
3. It can be used to create enthusiasm among pupils.
4. It lends itself readily to reviews and examinations.
5. It requires fuller and more careful preparation on the part of both pupils and teacher.

The repeated caution is that the topics should be leading ones and not burdened with too many minor details. The details are to be supplied by the students.

The organization of textbooks. The textbooks are organized under eight or ten topic periods, and these are variously divided into topic groups. The more modern texts give a greater proportion of pages and topics to phases of industrial, social, educational, and religious development. The teacher must in the main be guided by the topical arrangement of the text and *The State Manual*. Nevertheless, the teacher should not be a slave to the many facts crowded into the text, nor feel obliged to follow blindly the order of arrangement of material therein. The texts are often on a chronological basis, whereas it is often best in advanced history to pursue some topic to its end, passing by for the time other topics. A topic may be pursued through the lines of progress common in the advancement of all people.

Primitive beginnings are all simple, yet as the outcome of growth great diversity sets in, but there are common lines of growth which group about centers called "institutions." These lines are the political, the religious, the social, the educational, and the industrial, and the corresponding institutions are government, church, family, school, and vocation. The student may be led to take any event or great series of events and trace the effects upon any one or all of these institutions. These institutions, too, give the teacher his measuring-rod, that he may lay off just what should be em-

phasized and what passed over lightly. The emphasis should be on the ones which have materially influenced these institutions. Test the early colonial wars — King William's, Queen Anne's, King George's, and the French and Indian. The first three of these were simply steps leading up to the inevitable struggle between the French and the English for possession of the continent. The decisive struggle was the French and Indian War, which had far-reaching results as to what religion, what type of family, whether democratic institutions, and what education should prevail — the English type rather than the French. This war deserves full treatment, with emphasis on causes and results.

Take the case of slavery. The first load of slaves was brought to Virginia by a Dutch trading vessel purely as a matter of business, and they were purchased by the Virginians for use in the raising of tobacco. Slavery spread to the North, but the climate was against it as a business investment and it did not thrive. It spread in the South, where the climate favored such crops as were adapted to slave labor, and hence slavery fastened itself there. We thus see that in its origin the question of slavery was purely industrial, yet how it has shaken political institutions and affected social, religious, and educational problems! It was not settled merely as a moral problem, nor should the political squabbles over slavery and the battles of the Civil War be the only phases treated to dispose of the question of slavery in our history. Its influence should be traced into all the institutions, and until this is done the topic has not been amply treated.

Dates in history. Whilst warring justly against the cramming of useless dates, we must not disregard dates altogether, for a knowledge of some is absolutely essential. They have been styled the eyes of history. Leading dates should be taught with their events, then fixed by review. The following are suggestions for review drills: —

Place a list of events on the board, and call out pupils to place dates for them. Have some pupil write a list of leading dates on the board, and call on others to write the events.

Permit a pupil to rise, name a date or event, and call out another pupil to name the related event or date, the successful one giving the proper relative to name another, etc.

Place a column of dates on the board, and call on pupils to connect the events as the dates are pointed out.

Reviews. Reviews should be frequent. These may take different forms at times, so as to cover the same ground from a new point of view. Reviews may thus be: (1) Chronological. (2) Biographical. (3) Geographical. (4) Topical. (5) Games and recreations: (*a*) dramatizations; (*b*) historical cards; (*c*) character representations. In the latter a pupil impersonates some character, tells the story of his life, and other pupils are to "guess" the name of the character. Then another pupil impersonates, etc. (6) Special day celebrations and special school programs.

Aids. Maps and the blackboard should be freely used. Geography is given a new meaning when used in history, and all history has geographical location. Often the historical event was influenced by the geographical features of the country. The geography lessons should often be used to teach history. Incidentally the reading lessons should so be used. Many of our literary classics are of a historical nature, and these should be read as literature and also to impress phases of history.

Longfellow's *Courtship of Miles Standish;* Irving's *Sketch Book;* Cooper's novels; Irving's *Astoria;* Hough's *The Magnificent Adventure;* Jackson's *Ramona;* Franklin's *Autobiography;* Kingsley's *Westward Ho;* many well-written biographies, and other books should be read, some of them to be discussed in the history class and some in the reading class.

Some good historical works should be in the school library,

such as Fiske's five volumes (Houghton Mifflin Company); Ellis's *History of the United States*, eight volumes; Ridpath's *History of the World*. The fuller treatment in these permits many more graphic details. References to these, given to the children, will illuminate the lessons. The teacher should have several texts on her desk and some of the pupils may have others at home. In assigning a topic one pupil may be told to report what Eggleston says on the topic, another what Fiske says, still another what Mace says, etc., yet all be held responsible for what the class text says. This will add breadth and interest, and will develop a method of study.

Important results. (Adapted from Indiana's *State Course of Study*, 1916.)

After the story and biography of the primary grades and the history texts of the upper grades, pupils should be familiar with the following and probably other important topics: —

1. Columbus, Cabots, Raleigh, De Soto, Hudson, La Salle, Champlain.
2. Contacts with Indians; their influence upon colonial life, later life, their present status.
3. Typical colonies: Virginia, New York, Massachusetts, Rhode Island, Pennsylvania, and Georgia.
4. Causes, a few important events, and results of various wars.
5. The attempt at Confederation and its weaknesses.
6. The Constitution, its debate, disputed points, leading provisions, amendments, present liberal constructions.
7. Our territorial growth. Typical pioneer settlements and life.
8. Rise and influence of slavery. Slavery not the prime cause of civil war.
9. Leading inventions and their influence.
10. Noted pioneers, political leaders, army and navy leaders, and presidents.[1]

[1] To number 10 should be added the noted literary men and women, journalists, preachers, educators, philanthropists, captains of industry. How many know that the first really great philanthropists were Americans, that one, by order of the Queen, was buried in Westminster Abbey, where a

11. The main facts of educational and commercial growth and religious developments of this country.
12. Important treaties with foreign powers.
13. The United States as a world power, politically, commercially, morally; reasons therefor.
14. Men, women, legends, pioneer stories, later development of the local State. Its influence in the Nation.
15. Something of our European origins and our American neighbors.

III. Civics

An outgrowth from other studies. Civics begins incidentally with history, in connection with the early colonial problems and organizations to effect government, safety, health, and thrift. With John Smith in Virginia the idea of community life with common food, etc., comes up for discussion.

There were lazy ones who would not work. What did Smith decree for them? Who are the lazy in our community to-day? (Idle poor and idle rich.)

How did the colonials send letters? How did they transport commodities? What are some of the things we can unite and do for all in a better way than if left to individuals? (Mail, roads, etc.) The marvel of a letter carried from the United States to Shanghai, for two cents! Contrast with cost of letters in colonial times. How were barns built in colonial and pioneer days? How was the corn husked sometimes?

Do you know any one who holds office? What has he to do? How is he put into the office? How is he paid? What do taxes secure for us? Duty to pay taxes. Did you ever pay taxes? (Stamps.)

Who is a good citizen? Can he spread disease? How prevent careless spread of disease? Can he be immoral or a disturber of peace? Can he be lazy? Can he make and sell whiskey? Make and give it away?

What is the use of laws? How are they made? How enforced?

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tablet yet marks his grave, that he was buried with ceremonies of nobility, that his remains were afterwards brought in great state to this country, etc.? Who was he, and has any other American been buried in Westminster? How has he influenced this country?

These are questions indicating a concrete, inductive way of approach to the study of civics. Civics is more than civil government; it embraces the problems of community life, and should impress that "No one liveth unto himself."

Practical civics. Modern studies in civics have, like modern history, departed from the narrow political and constitutional, to the broader social, industrial, and even hygienic, life. Sanitation is a topic in civics. Good manners enter into civics. The life of the school should stimulate mutual helpfulness, inculcate the ideas of community life, be a miniature democracy at least in its incipiency. Care of public property may be improved through a public property committee. There may be similar committees on tidiness of rooms and grounds, on preparation of lunches so that all may eat together with a common pot of coffee, tea, etc., on invitations to special programs so as to promote a campaign of interest of the community in the school, on the care of smaller children, or on whatever in the judgment of the teacher can be so delegated. Thus orally and incidentally civics may be taught in all the primary grades.

In the two upper grades and in connection with a study of the adoption and operation of the Constitution, a special text may be taught to organize the subject to better advantage in the minds of the students. This text should be a modern one, and the instruction throughout should aim to keep in touch with the children's interests and to direct these toward community coöperation for the best and highest life of all. Both history and civics should function in the lives of the children.

Our treatment of civics is brief because of limitations of space, and not because of its minor importance. The art of living together is one of the finest of arts to be learned. The great war in Europe now clearly shows that the civilized

world has not learned this art thoroughly. Have we in America done better than Europe?

QUESTIONS FOR DISCUSSION

1. What changes have taken place in the point of view of history? What one-sided point of view dominates much of history teaching? Where should the emphasis be placed?
2. Why is history as taught often a dull study? What is the way to connect it with the natural interests of the child?
3. Find when and where your county was first settled. Collect local incidents for history stories.
4. Discuss the different types of historical stories and their respective places in presenting history.
5. What are the helps and the hindrances of the textbook in history? Need a textbook be followed strictly as organized? How vary it?
6. What correlations of history and literature?
7. Give a summary of the important things a child should become familiar with in the course of history in the elementary schools.
8. What the values of dramatization in history teaching?
9. How has the point of view changed in civics?
10. What familiar illustrations may be drawn from the experiences of the children?
11. How use the school as an object lesson in civics?

I. SUPPLEMENTAL BOOKS FOR PUPILS AND TEACHERS

The following list is only a partial one. Nearly every one of the principal houses publishing schoolbooks has a collection of books of good history stories and texts, suitable for use by teachers and pupils. The teacher should write to these houses for descriptive price lists. Many of these are on exhibition for inspection at the leading summer schools for teachers, and an examination of them will well repay a teacher.

Andrews, Jane. *Ten Boys on the Road from Long Ago till Now.* (Ginn & Co.)
Andrews, Jane. *Seven Little Sisters.* (Ginn & Co.)
Brigham, A. P. *From Trail to Railway.* (Ginn & Co.)
Dopp, Katherine E. *The Early Cave Men; The Later Cave Men; The Lake Dwellers; Early Sea People.* (Rand, McNally Company.)
Eggleston, Edward. *Stories of American Life and Adventure.* (American Book Company.)
Hall, John. *Viking Tales.* (Rand, McNally Company.)
Hart, A. B. *Colonial Children.* (The Macmillan Company.)
Judd, M. C. *Wigwam Stories.* (Ginn & Co.)
Mabie, H. *Norse Stories.* (Dodd, Mead & Co.)

McMurry, Chas. A. *Pioneers on Land and Sea; Pioneers of the Mississippi Valley; Pioneers of the Rocky Mountains and the West.* (The Macmillan Company.)

Perkins, Lucy Fitch. *The Cave Twins.* (Houghton Mifflin Company.)

Pratt, M. *American History Stories.* (Educational Publishing Company.)

Semple, E. C. *American History and its Geographic Conditions.* (Houghton Mifflin Company.)

Several Authors. *The Great Lake Series.* Four books treating respectively great events around Lakes Huron, Erie, Michigan, Ontario, and the Mohawk Valley. (Ainsworth & Co.)

Valuable.

Waterloo, Stanley. *The Story of Ab.* (Doubleday, Page & Co.)

II. BOOKS FOR TEACHERS

Andrews, E. B. *History of the Last Quarter of a Century.* (Charles Scribner's Sons.)

One of the best accounts of reconstruction days and after.

Bourne, H. E. *The Teaching of History and Civics.* (Longmans, Green & Co.)

Charters, W. W. *Teaching the Common Branches.* (Houghton Mifflin Company.)

Cheyney, E. P. *European Background of American History.* (Harper & Brothers.)

Dunn, A. W. *The Community and the Citizen.* (D. C. Heath & Co.)

A suggestive textbook of the new type of civics. Good for use as a text.

Findley-Johnson, Harriet. *The Dramatic Element in Teaching.*

Freeman, F. N. *The Psychology of the Common Branches.* (Houghton Mifflin Company.)

A Course in History for Elementary Schools, prepared by eight members of the faculty of the State Normal School of Colorado.

One of the best organizations through topical treatment, and most suggestive in method.

Hill, Mabel. *The Teaching of Civics.* (Houghton Mifflin Company.)

Kendall and Mirick. *How to teach the Fundamental Subjects.* (Houghton Mifflin Company.)

McMurry, Chas. *Special Methods in History.* (The Macmillan Company.)

The complete program of this book can best be carried out in schools fully graded, with a teacher in each grade.

Sparks, E. E. *Expansion of the American People.* (Scott, Foresman Company.)

CHAPTER XIV

GEOGRAPHY

Old and new types. Geography in the ancient world and in the Middle Ages was only slightly developed and not really separated from other sciences, such as astronomy and geometry. The discovery of America greatly stimulated an age of travel, discovery, and exploration. All sciences came to a new birth, and especially was there more need for geography of the real world. In the nineteenth century geography soon became a separate branch for study in the elementary schools. With the bookish tendency of all school studies, geography became largely a study of maps, with stress on the boundaries of countries, locations of rivers, cities, mountains, and capes, with some little descriptive matter about the countries. This latter became so matter-of-fact and so dry that many rural schools omitted it, thus limiting geography to map study. Very minute places were asked about in map questions, and what little interest there was on the part of the children was due to the similarity between finding these places and working out a puzzle. In many rural schools the most uninteresting recitations are in geography — yet of the old type — and such geography is valueless.

About the middle of the nineteenth century geography began its development as a natural science. The approach to it as a science came in two directions. Ritter, a German historian and a teacher, was probably the founder of modern geography. He was interested as a historian in the relations between man and his geographic surroundings. He would have the study begin with the natural environment of the student, and that is the method of what we call "home

geography." He instituted map-drawing and comparisons of countries to bring out principles. The other approach was established by Humboldt, a German explorer, who stressed the physical features, the altitudes and the plains, the lines of common temperature, and other facts of the surface of the earth itself.

A study of the earth as the home of man. Geography has since developed into a science with so large a field that it is now subdivided into mathematical geography, physical geography, commercial geography, industrial geography, political geography, and about the latest is anthropo-geography. These special fields receive full treatment in separate books, and the whole field rises to the dignity of a department in some of our greatest colleges and universities. The two approaches set up two points of view, the human and the physical, and these have had turns in ascendancy. The first great modern geographies for our public schools were built upon the physical emphasis. They would have in home geography the study of slopes, soils, climate, weather, and other natural objects and phenomena. The later tendency is to place greater emphasis on the human factors. One of the most frequently quoted definitions is that given by Guyot, a disciple of Ritter, which is "Geography is the study of the earth as the home of man." The first emphasis was on *the study of the earth;* the second is on *as the home of man.* We want to know how man makes his home on the earth, and what the factors are that affect his life. We need to note how man, the earth, and life on the earth, have influenced one another. This is the essence of the "new geography."

Geography is connected up with the study of nature, which first sends the child out to find things for himself independently of books. The children's interest in people give an approach through the stories of children of many

lands, which in turn lead to the knowledge of the globe and of various countries. We may call these two approaches:—

(1) The Nature-Study Approach.

(2) The History-Story Approach.

Geography must be related closely to the life of the child, and there again the rural school has in many respects a great advantage. Geography is capable of being made of much greater interest to the rural child than it can be made to the city child. The earth and its fullness is around the schoolhouses and the homes, and the geographic processes and forces are directly in evidence; whereas in the city these are made artificially obscure. The town and city children have more direct touch with commerce, yet the rural children do not lack this touch.

Some values. The "new geography" is a school subject of great value. It has its practical utility in knowledge of the sources of raw materials, such as corn, cotton, wheat, grapes, tea, coffee, sugar, coal, iron, and all useful commodities; in knowledge of markets, trade centers, best routes of shipment and travel; in knowledge of the places and facilities of manufacture and the possibilities of the home regions undeveloped. The farmer can use to his advantage all of this. Geography has other values in information about our own country and people, our relations to the other peoples of the world, our mutual interdependence, the meaning of current events and geographical allusions of newspapers and literature, places worth while to visit, and in many ways it contributes to enjoyment of leisure and life.

Rural people are sometimes accused of being provincial and narrow; geography and history are the subjects which broaden their horizons and their sympathies, and make them citizens of the world. This tends to make them more patriotic, and certainly more valuable locally as citizens in their own communities. People of some sections of the

United States are not well acquainted with the traits and accomplishments and hopes and visions of people in other sections. This makes them unsympathetic and engenders harmful jealousies. A crime may be committed in one State, and the people of another State are bitter in their denunciations of the heathenism which permits the crime, when in that other State crimes just as heathenish may have been frequent and the totality of crimes much greater. It is the old story of the mote and the beam, and probably geography can contribute something to that charity which is the greatest thing in religion.

We are not only out of touch with our own sections, but we are woefully ignorant of our Latin-American neighbors. Both the practical and the cultural possibilities of geography have been little realized.

I. Primary Geography

The story approach. In the story lessons presenting children of many lands, Schwatka's *Children of the Cold;* Jane Andrews's *The Ten Boys* and *The Seven Little Sisters; The Norse Stories; The Vikings*, and all the early historical persons, the globe or a large map of the world should be used to locate the country of each story. It is best to use the globe first; then the map and the globe together. A talk with the children about the globe and the big round earth will pave the way for use of the globe in the third grade. The location of home may first be learned; then other places located and journeys thereto traced out. Something of each country's features, climate, people, occupations, games, and sports, will make the story more graphic. Our common articles of food and clothing will furnish topics for discussion, connecting us with various countries, — coffee with Brazil, tea with China, sugar with Louisiana, Cuba and Hawaii, cotton with

the South, etc. This correlation with stories — making the child's home the center and relating other places to it in some way — will give the child a good foundation set of ideas about the world as a whole, its bodies of land and water, and its people. Pictures should be freely used with these lessons. Fortunate is the school with a lantern to reflect pictures. A stereoscope also is excellent.

REFERENCES

Andrews, *Seven Little Sisters of the Big Round World.*
Carroll, *Around the World Series.*
Perkins, *The Twin Series.* (Houghton Mifflin Co.)
Shaw, *Big People and Little People of Other Lands.*
The Youth's Companion Series.
Toward the Rising Sun (Japan, China). (Ginn & Co.)

The nature-study approach. Nature study offers a way into scientific geography, and both nature study and geography furnish the necessary foundation for agriculture. The physiographic features, the forces and agents at work on the earth's surface, the making of valleys and soils, and the life of the environment are all topics for first-hand study in the surroundings of the rural school. This means nearby field lessons with the teacher at times, and at other times the sending out of children with problems or questions to find the answers in the fields, woods, streams, air, and sky. These are genuine nature-study lessons, which connect up with the occupations of man.

Suggestive topics. The following are given merely as illustrative of the possible topics and method: —

1. *The three parts of the earth, land, water, air.*
   a. Land, a solid. Walk on what to school? House rests on what? Compare with water; with air. It is a solid. Give ideas of its surface limitations in all directions.
   b. Water, a liquid. Do what with water we cannot do with land? (Pour, drink, wade in, etc.) Moves freely; flows

down slopes; collects in low places; takes shape of vessel containing. What kind of land will behave most like water? (Sand.)

c. Air, a gas. What is air? Can you feel it? See it? How high? (Tree-tops, birds, clouds.) Does air keep still ever? What do we call air in motion? What has been done by air in motion? Color of distant objects, hills, sky? Why blue?

Is it warmer at noon or in morning? Day or night? On which side of the house is it coolest, and why? Why cooler at night? What heats the air? How does air protect us from cold? How many uses of air can you name? Tell all you have found out about air.

2. *Directions and weather.* Have some boys plant a tall pole in a level place where it will be convenient to observe its shadow. If possible have them place on it or on the house a weather vane of any kind which will indicate the direction of the wind. Get from the United States Weather Bureau directions for voluntary observers; also pictures of typical clouds.

Have children observe direction and length of the shadow from same point a few times morning, noon, afternoon. Changes why? Shortest when? Shape of sun's path across the sky?

Shadow midday points north, and the sun is in the south. Face north and the right hand will point E., left W. Directions of corners of yard from front gate? How does the schoolhouse face? How respective homes?

Have shadows observed a few times in fall, winter, and spring. Observe sun's path fall, winter, spring. Compare. Sun rises where? Sets where? Changes in these? In how many ways can we find the north and south line? Find north star, big dipper, and observe motion of stars. A compass here will prove of great interest, also a magnetized needle on a cup of water. Establish a noon mark.

Note rains and the prevailing winds before and after rains and in long dry seasons. Have some pupils keep a weather chart one month, some another so as not to get monotonous, yet to get a chart for every month of school. Have home observations for early and late in the day, and in early night.

What are the many services of the sun? How did the Indians and pioneers locate the north when in forests?

3. *Water.*

a. In the air. Place a pan of water where it will evaporate. Ask what has become of it. Boil water and note its disappearance. Teach vapor, steam, clouds. Is all the air's moisture in clouds? (Ice pitcher experiment.) How does the air get its moisture? On what kind of nights does dew collect? It comes from where, and how?

Why collect on plants and flowers? What becomes of the drops of dew? What has been called "cloud dust"? What does the air do with its moisture? Uses of water in the air. Teach rain, mist, fog, hail, snow, frost.

b. On the Land. Bring out the idea of slopes and their universality. Is any place on the earth naturally level? Kinds of slopes: gradual, steep, long, short, rough, grassy, etc. Observe slopes about the school. Note where two slopes meet at bottom, at top. Teach water-meeting, water-parting, divides, creek beds, rills, branches, creeks, creek systems (where several run together), rivers, river systems, banks, basins, pools, ponds, lakes, oceans.

Bring out the many uses of slopes by having thoughtful consideration of the questions: What if there were no slopes? What if all were steep?

Uses: 1. Produce springs, streams, oceans, etc. 2. Distribute soil. 3. Make variety of climate, plants, and animals.

c. Water in the earth. What becomes of the water that falls as rain? Does it all run into creeks? Go back to clouds? What becomes of that which soaks in the ground? Through what kind of soil will it sink deepest? What will stop its course? Change its course? Does any of it ever come out again? All of it? Springs, wells, caverns, streams, mineral springs, etc. Uses of underground water. Plants and water.

4. *Land forms.* In connection with the study of slopes the land forms, hills, mountains, valleys, plateaus, deserts, and swamps may be taught.

5. *Soil-making.* Examine some sand to see what it is made of. Examine clay for rock particles. Show samples of rock, mica, quartz, feldspar, marble, granite, slate, soapstone. Which is made out of harder rock, sand, or clay? Why do you think so? Tell pupils that sand is mostly quartz, clay mostly feldspar.

Bring in some black soil from the woods or woodyard. Examine its contents, and teach loamy soil. Bring out the work of weathering, of streams, of plants, and animals in the making of soil. Uses of soil.

What makes soil fertile? How does nature regulate fertility? (Returns crop to soil). How does man interfere?

6. *Our needs.* (1) Food. Make a catalogue of vegetables raised within one mile of the schoolhouse. Do the same for fruits, for grains. What the chief product of the home county? What foods in use not raised in the county? Sources of these? Is the county as thrifty as it should be in raising necessities?

   In some similar way study clothing materials, sources, related trades. Also study shelter and ideal homes.

7. *Occupations.* (1) Farming. (2) Stock-raising. (3) Lumbering. (4) Mining. (5) Fishing. (6) Manufacturing — flour, cloth, iron, steel, wood, etc. (7) Trade, transportation, commerce.

All this should be treated orally and first with observation of outdoor surroundings. Then some stories of travel, of industry, and of parts of the earth may be read. In connection with this concrete study of home surroundings, the lessons described under Civics come in as an integral part. In taking the children out for observation, or in sending them out, the teacher should have in mind some definite things to be seen, and the discussion should focus on these; other things passed briefly.

This oral work is as necessary to give vitality to geography and agriculture as the story work is to build interests in history. It is the kind of geography that the child at that age is prepared to comprehend, and it gives him notions to be used in the apperception of later geographical ideas.

Primary globe lessons. Some clear notions of the world as a sphere and the relations between its parts should be learned from the globe before proceeding with flat maps. The first globe lessons may be as indicated along with stories of people. Thus the pupil may come to know something of the shape, largeness, and principal land and water divisions of

the earth. If this has not been so done, the globe lessons must begin with first concepts of these things, and this may be done in the third grade. It is true that the movement seems to be from the child's home gradually outward, from the known to the unknown, yet it is quite valuable to have a view of the earth as a whole so that the movement outward will be an analysis of the whole, and that places may be seen in their relations to the whole. A few lively globe lessons will do this as no book study by the children alone can ever do.

Some of the things to be taught are the following: Shape; land and water surface; motion; axis; poles; equator; hemispheres; the elevations and great slopes; the continents and oceans; and something of the earth as a heavenly body.

An eight-inch globe is a good combination size to get clearness and yet not be too clumsy to handle. The ideal equipment would include also a larger globe, individual three-inch desk globes, and a slated globe for drawing the outlines of surface features. If nothing better can be had, the teacher can get a six-inch globe mounted on wire for from twenty-five to forty cents, and this can be used to great advantage, if the class is not too large. Lessons may begin and proceed somewhat as follows: —

What is the shape of the school globe?

Point out with the finger the parts that represent land. The water parts. Which is greater, the land surface or the water?

Turn the globe around once. On what does it turn? (Axis.)

Where is the least motion when it turns? (Ends of axis.)

Where is the fastest motion when it turns? Place a piece of chalk at a point just as far from one end of the axis as from the other. Some other such point. Still another. How many such points? Teach North Pole, South Pole, and Equator.

Does the real earth turn? What is its axis? Where is the North Pole? The South Pole? The Equator? Tell something about these. Teach revolution and effects of the earth's motions. Tell something of other heavenly bodies.

Show the class the Eastern Hemisphere, naming it; and the

Western Hemisphere, naming it. Ask a pupil to turn the globe so that the Eastern Hemisphere is toward the class. Call another to show the Western. In which is there more water than land? Find where the water nearly cuts the land of the Western Hemisphere in two. The two parts are continents, North America and South America. Which should be North America? Which South America? Teach Isthmus of Panama.

Find where the water nearly meets across the Eastern Hemisphere. Teach the African Continent, the Eurasian Continent, and the Isthmus of Suez. Tell of the canals, Panama and Suez.

Show Australia. Show and name the oceans, the Mediterranean, the Red, and the Caribbean Seas, the Gulf of Mexico, and Bering's Strait. Drill on these land and water bodies, calling pupils to point them out.

Why is the land surface where it is? The water where it is? Trace the world ridge northward through South America and North America, then across Asia and Europe and southward through Africa. Trace the great slopes and the shorter slopes of each continent; the great stream systems of each slope; the ragged coast lines with the inlets of water and jutting out of land.

These are miscellaneous suggestions for inductive globe lessons. Having learned the elementary facts, the lessons may proceed with life on the earth, the people and products, the animals and plants, the climate, etc., of the main regions. Then the lessons should center around home, our neighbors in the States, and in Canada and Mexico. No technical mathematical geography should be introduced in the primary lessons; even latitude and longitude, zones, proofs of the earth's rotundity, and reasons for the changes in seasons should be postponed to advanced geography. A primary text may be used in which the treatment may be along the lines suggested, making the central study one of people, occupations, and the relations of these to the features and climate of their respective countries. The oral lessons in home geography are generally assigned to the third grade, a

primary text to the fourth and fifth grades, and an advanced text to the sixth, seventh, and eighth grades. With alternation in rural schools, it will be a good plan to arrange the topics for home geography and the lessons in a primary text so as to divide these between the third and the fourth grades, and use a second book in geography with the fifth and sixth grades, alternating. In the seventh and eighth grades, the geography should treat more fully the industrial and commercial world, relating it to the agriculture of these grades and the needs of rural life.

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Merrill, F. H. *Geographical Readers.* (Webb Publishing Company.)
Payne, S. O. Geographical Nature Study. (American Book Company.)

II. Advanced Geography

Need for type studies. Geography is like history in that its facts are so numerous and of such varying degrees of importance that organization becomes difficult. There has been too much cramming of many facts, thus destroying the scientific nature of geography. We need unifying principles. Two methods of procedure will aid greatly in organizing the lessons taught. The method of causal relations is the chief one to unify geography in a scientific way, and a study by means of types groups things into larger wholes, while comparison of types results in setting up rational relationships. The study of types offers excellent opportunities for seeking causal relations, and tracing such relations through similar types. McMurry, in his several books on the teaching of geography, has been our greatest exponent of the type-study method, and through the development of this method he has

contributed more to advance the teaching of geography than can be attributed to the influence of any other reform.

What a type study is. A type is a central topic to be elaborately treated by bringing much to supplement what may be in the text, to enliven and vivify, and to give a unit of comparison. A city may be taken as a type. It should be studied so as to bring out full knowledge of the trade activities making the city. A city is a trade center. McMurry thinks that Minneapolis-St. Paul is an excellent type to trace development from simple beginnings to a great lumber and flour center. The location at the falls and the nature of the surrounding country are seen in causal relation in the building of these great twin cities, now growing together. A full description of the river there, the timber above, the nature of the soil adapting it to wheat, the beginning of sawmills to convert logs into lumber, the reaction of this on the building of houses and the bringing of settlers to grow the wheat, the beginning of mills to convert the wheat into flour, the growth of these into great industries, — all these will enter into a graphic presentation of these two cities as trade centers.

Pittsburgh, at the head of navigation for large boats on the Ohio River, and a center of coal and iron industries, is a good type to study and to compare with Minneapolis-St. Paul. Niagara Falls, the building of Buffalo, and the growth of New York City as the most available point of outlet for the commerce of the Great Lakes and a vast area of the United States, all tie up in a large type study of greatest importance. The type study gives opportunity for the employment of the topical method in teaching, and all that was said in favor of the topical method in history is applicable here.

Type cities. A large topic may be, "The Cities of the United States." Not all can be studied, and it is desirable

to work up fully only a few as types. Other port cities may be Boston, Philadelphia, Baltimore, Savannah, New Orleans, San Francisco, Seattle, and Los Angeles. On inland watercourses, somewhat like Pittsburgh and Buffalo, are Cincinnati and St. Louis. Inland and not on navigable water are Indianapolis, Kansas City, Atlanta, Dallas, Denver, and Salt Lake City. The list should, of course, include the city and towns nearest the school. All of these will be found to have some points in common, each being a trade center, and, sooner or later, every city becomes a manufacturing center for an increasing number of trade articles. Yet no two cities are alike, each having individuality. There are reasons to be sought why a city was built just where it is. These may nearly always be found in physical advantages, yet a few have been located historically, like New Orleans and Petrograd, where there are many disadvantages. The causes back of the making of these cities will explain the individuality of each, and bring out the influence of the environment in shaping the destinies of people as well as the use man makes of his environment.

North America a type continent. This will naturally be one of the first for study. That portion of the world ridge which runs through the continent is its backbone. There is a long slope running toward the Atlantic, and a shorter slope toward the Pacific. Each slope is broken in places by lower ranges of mountains, making counter slopes. There are high plateaus, there are river systems of each slope and counterslope making valleys and lowlands, and there are inland water basins. There are regions inclined to be desert and barren, with natural causes to explain their existence. The general shape of the continent is triangular, with characteristic features of each shore. After many oral lessons with the class, developing this type, general comparisons should be set up with the other continents — South Amer-

ica, Africa, and Eurasia. These quick general comparisons will be very illuminating and valuable.

A river system is another type. A few representative kinds should be selected for study, as with cities, and the others studied by contrast.

McMurry has prepared full type studies for the United States and North America. His books will help any teacher well along the highroad of type study, and the remainder of the journey will be one of joyful discovery.

Man's contact with nature the center of geography. McMurry says that the outcome of man's contact with nature is the center of every strictly geographic fact. This is true, and the mere learning of the locations of far-away capes, inlets, towns, etc., without connecting these in some way with human life and progress, is a wasteful, valueless study. But we must not lose sight of the geographic influences on man. All of these should be studied as such, chief among which are climate, rivers, oceans, and mountains. Causal relations should always be kept in mind. Emphasis upon causal relations as affecting the life of man may be said to be the characteristic of the "new geography."

Map-making. The making of maps has long been considered an essential in the teaching of geography. Maps made by the pupils do aid in fixing and in making definite many details. These make observation more accurate, and the making develops the power of interpreting. Young pupils, when first coming to the study of geography, need to be educated to interpret a flat map. A globe divided into hemispheres, but with these hinged together so that when open the hemispheres on the globe are seen in imitation on the flat surfaces, will aid the mind in passing to a concept of flat maps.

Too much stress has at times been placed on map-drawing. The pupils should learn to sketch rapidly a fairly good out-

line. This is better practice than that of giving much time and patience to drawing to an exact scale. This exact work comes later, and the teacher who will often sketch on the board will get better results.

Drawing the schoolroom and the locality. Mapping the schoolroom will serve as a convenient beginning. The general shape of the room should be observed; then the teacher should draw the floor outline on the blackboard. The pupils then try to locate the teacher's desk in the map, and, when this is placed, they locate the stove and other general objects. The teacher may draw small squares to represent the pupils' desks, and the pupils are to detect their own locations. Call first some pupil whose desk is in one corner, or otherwise easy to locate, then ones for other corners, then their neighbors, and thus until the map is complete. It will be a help if the teacher purposely draws the floor outline with the northern side at the top. Pupils should determine the directions, pointing out the east side, the west, the north, and the south, and naming the directions of the corners. The pupils should be requested next day to draw a map of the room, then of one or more of the walls.

Soon a trip should be made to a small field near by, its outline noted, and its surface features located accordingly, beginning with the northern side probably. Returning to the schoolroom the teacher and pupils, working together, draw a map of the field. This exercise may be extended at will, but soon the sand box should be introduced, and the first of these maps traced in the sand. The school floor is level, but the field is not, and the field map introduces elevations and slopes. After a few such lessons, sand maps of a continent may be undertaken, then outline maps of the continent sketched on paper.

Filling in outline maps. Bare outlines of a continent or State are useful to give the pupils to fill in. The filling-in

may be done progressively as the lessons develop. Separate sheets may be used for different purposes. The first may locate the general surface features and the cities and towns. Others may be a products map, a political map, an industry map, or any specialized exhibit map. If the pupils cannot be required to purchase these outline maps, the teacher may make some with the mimeograph. These often will save time, for the pupils might take the whole period getting the outline ready, when the lesson is to locate towns and cities. However, sometimes the outlines should be sketched from memory, and other details filled in from memory, for this gives excellent drill and review.

Imaginary journeys. In imaginary journeys a pupil is called upon to take a voyage from New York City to Buenos Aires, — or any such voyage, — the vessel to be described, the lading, stops and scenes *en route*, transactions and lading at Buenos Aires, and the return. Inland journeys may be called for — pleasure journeys to the Grand Canyon or elsewhere, and trade journeys in like manner. These add zest to the lessons, serve as reviews, and enable the pupils to bring in lively details. Days may be assigned for pupils to describe journeys, each selecting his own trip and preparing his story. Other pupils should ask questions to learn things from the travelers.

Use of pictures. The texts now have many illustrations. These should be discussed with the class. Others should be obtained from railroad literature, tourist agencies, guidebooks, and other sources. Every one of the great railways has for free distribution, from year to year, some excellent pictures and well-written literature. Collections of these should be made, and the pupils taken on trips over each road. The old geographies studied river routes fully, but the geography of to-day must stress rail routes. A study of the Santa Fé, the Canadian Pacific, the Pennsylvania, or

the Southern Railroad, with illustrations *en route*, will be a graphic type study of great value. The imaginary journey may traverse some great rail system or river.

If a lantern can be had, some of the best pupils may do the talking at a night program for the community, taking the listeners on tours of the world. *The National Geographic Magazine* brings out many marvelous pictures in colors, and these can be projected by a simple lantern so as to magnify and give the color effects. Many beautiful picture postcards are now issued and are very useful for geography work. One of the school programs may charge a fee to pay for such a lantern. The stereoscope is an inexpensive instrument, and stereoscopic pictures of people, places, industries, etc., of many lands may be had from publishing houses. All such material helps to make geography teaching more vivid and more vital.

Other helps. Every schoolroom should be equipped with a full set of roller maps, a large globe and a small one, a collection of geographical books in the library, and, if possible, with a projection lantern. To use the lantern in the day, shades must be fixed so as to darken the windows. But the boys and girls may construct these if they cannot be purchased. The isolation of rural life and the rural school calls for better equipment of school plants, and through geography, history, and literature rural children may become citizens of the world, with cosmopolitan vision. Financial generosity should be at its best when it comes to the welfare of children.

QUESTIONS FOR DISCUSSION

1. Outline the evolution of geography as a science, giving the essence of the "new geography," its change in point of view and methods.
2. Would it broaden the notion of geography to consider it a study of the earth and life thereon in their relations to man rather than a study of the earth as the home of man?

3. Wherein is a need of a better study of the geography of our American neighbors?
4. Why the need of the two approaches given for beginning geography? When may these begin? When may a textbook be used?
5. What is a type? What the values in a use of types in geography?
6. Take your nearest river and the metropolis of your State and develop each as a type. Collect all the facts and materials you can to vitalize these types. Treat likewise your nearest large railroad. What are its relations to everyday living in the community of your school?
7. Take climate as a topic and develop a lesson outline to show its many causal relations. What are the relations between the type system and the topical method in treating geography?
8. Show the values of geography in correlation with other subjects.

I. SUPPLEMENTAL BOOKS FOR TEACHERS AND PUPILS

Carpenter, Frank. *Geographical Readers for North America, South America, and Asia.* (American Book Company.)

Carpenter, Frank. *Geographical Readers; Industries.* (American Book Company.)

DuChaillu, Paul. *Wild Life under the Equator.* (Harper & Brothers.)

Irving, Washington. *Astoria.*

Merrill, F. A. *Our Country.* (Webb Publishing Company.)

Perkins, Lucy Fitch. *The Twins Series of Geographical Readers. The Eskimo Twins,* Grade II; *The Dutch Twins,* Grade III; *The Japanese Twins,* Grade IV; *The Irish Twins,* Grade V; *The Mexican Twins,* Grade VI; *The Dutch Twins Primer,* Grades I–III.

Stanley, Henry. *In Darkest Africa.* (Charles Scribner's Sons.) Two volumes for library.

Stoddard; *Lectures.* (Balch Bros. Company.)

Well-written and illustrated volumes for the library.

Greater America. (Youth's Companion.)

Our recent possessions.

Van Bergen. *Story of China and Story of Japan.* (American Book Company.)

There are hundreds of other good books to be found listed in the catalogues of publishing houses.

LANTERNS, PICTURES, AND MAPS

For projection lanterns and balopticans, Bausch and Lomb, Rochester, New York.

For stereoscopes and pictures, Underwood & Underwood, New York City.

For railroad literature, passenger agents of many railroads.

For a large map of the United States free, Department of the Interior, Washington, D.C.

II. BOOKS FOR TEACHERS

Brigham, A. P. *Geographical Influence in American History.* (Ginn & Co.)

Holtz, F. S. *Principles and Methods of the Teaching of Geography.* (The Macmillan Company.)

This is an excellent modern book for teachers.

McCormick, H. *Methods in Geography.* (Public School Publishing Company.)

Good, especially for treatment with illustrations of imaginary journeys.

McMurry, Charles. *Type Studies in the United States and North America.* (The Macmillan Company.)

McMurry, Charles. *Larger Type Studies in the United States.* (The Macmillan Company.)

Sutherland, W. J. *The Teaching of Geography.* (Scott, Foresman & Co.)

Excellent. Treats scope, methods, and practical suggestions.

CHAPTER XV

ARITHMETIC

Another necessary tool subject. Arithmetic is a tool subject which might have been treated earlier along with reading, spelling, and writing, but a chain of correlations brought in other subjects. Arithmetic has its correlations which might have been used to treat it incidentally along with other subjects, and some theorists are advocates of such treatment as the only teaching of arithmetic necessary. The primary-school activities call for counting, measuring, and parceling. Dates in history, distances and latitudes in geography, measurements in handicrafts, problems arising in agriculture and home economics, all open opportunities for coupling arithmetic with children's interests and the other work of the school. Nevertheless, there is a formal side to arithmetical teaching which calls for drills to secure accuracy, speed, and skill. The necessary extent of this drill is shortened and its terrors mitigated by the practical correlations. The teacher who expects through interest to escape drill will likely come to grief in final tests. However, the other extreme of using arithmetic for disciplining the mind in long drills and abstract-number gymnastics, to the neglect of the real life applications, is the worse. The setting of arithmetical problems in their connection with other school subjects has vitalized modern methods in arithmetic, but we still need a special time in our school schedule and a separate text for arithmetic.

Some reform tendencies. There has been for a quarter of a century a growing tendency to eliminate many topics in arithmetic teaching and to abbreviate others, and this has

led to the rewriting of textbooks, as well as to a choice of topics from those treated in the book. Rural schools have given an undue proportion of time to arithmetic, and the good results have not been apparent. This weeding-out of waste materials should find readier acceptance in these schools than has so far been the case.

How little arithmetic we need. The great demand for arithmetical knowledge, in everyday life, is for accuracy in addition, subtraction, multiplication, division, and simple and decimal fractions, with a very elementary knowledge of interest and percentage. We really need but little more. The following indicates the chief eliminations which should be made: —

1. In everyday life it is very rare that any but the simplest fractions — halves, thirds, fifths, sixths, eighths, tenths, twelfths, and hundredths — are used. Fractions with large denominators, complex fractions, and fractions of an unpractical nature should be eliminated.
2. Using only simple fractions, no long methods for G.C.D. and L.C.M. are needed. Inspection and factoring will enable one to deal with the needed operations as needed.
3. In all ordinary calculations decimals are carried to three places only. There should be no great waste of time drilling beyond this.
4. Improbable examples, such as many of those given in the multiplication or division of denominate numbers; unused measures; problems in interest involving finding the time, the principal, or the rate; true discount; annual interest; cube root; compound proportion; commercial exchange, and stocks and bonds; — these may all be omitted with advantage not only to the work in arithmetic, but to the advantage of the other work of the school as well. In the elementary school, square root

should be handled by learning the squares of the few simple numbers likely to appear, and the square root may then be named at sight. However, the full process of finding the square root may be taught, since it is not complicated. Its demonstration belongs, however, to advanced arithmetic, and hardly comes within the needs or purposes of the rural school.

5. The metric system is very desirable. It would eliminate most of our uses for common fractions and would simplify many calculations. Yet we do not use it in common affairs; hence it should be omitted in ordinary classes in rural schools.
6. Longitude and time should be taught in geography, and the final practice of using time belts of one hour each there explained.

The traditional text in arithmetic needs to have much taken from and generally much by way of vital problems added to it.

The fundamentals in arithmetical instruction. The fundamental things that should be taught may be stated as follows: —

1. The fundamental rules, fractions, ratio, and proportion are the tools; everyday home and farm transactions, mensuration, and applications of percentage are the chief uses for these tools. These are the essentials to be taught.
2. The fundamental aims are two in number: (*a*) The school exercises in arithmetic should relate to the work of the child and his surroundings, and should prepare as nearly as possible for the experiences of life. (*b*) Accuracy, rapidity, and skill in calculations are very desirable acquisitions. The elementary combinations and their separations should be made automatic.
3. The fundamental method should be, first, to present

concrete problems, examples, things to measure, count, or calculate; second, to find the general principle illustrated; third, to return to the concrete with applications to problems of practical life to fix the principle through practice.

I. Systems of Primary Method

The old system. Following this general plan pupils were first taught the tables, the greatest stress being placed on the multiplication tables. These were studied and drilled upon somewhat like the method of beginning reading by first learning thoroughly the alphabet. After some degree of efficiency in the tables, this memory knowledge was tried out in working examples. Then the different topics of arithmetic, G.C.D., L.C.M., fractions, denominate numbers, percentage, profit and loss, mensuration, etc., were all treated separately, with no correlations. The method in teaching these was, first, committing the rule; second, "doing sums."

This method was entirely deductive, and taught the abstract notions first. Modern method puts abstraction and deduction last.

The Grube System. The doctrines of Pestalozzi (1746–1827) introduced into school practices many reforms which tended to overthrow old methods, especially in primary work. He contended that all knowledge is obtained through the senses, and instruction should, with young children, be based on observation. In arithmetic this led to oral work, with observation of objects to develop ideas of number and numerical operations. A complete and fully organized system of number-teaching along these lines was formulated by Grube, and this system has had wide usage. Some of its principles are as follows: —

1. Arithmetic must at first be taught through the observa-

tion and handling of objects by the pupils. Number concepts are thus to be formed, and with objects the pupils are to develop the tables of combinations.

2. Number in the abstract should be reached through concrete examples, well graded from the smaller numbers to larger ones.
3. Each number should be learned in all its variations, before the next higher number is learned. This principle exemplifies the gradation. It will be illustrated after the next principle.
4. Repetition is to be regular and systematic. Variation comes in with use of different objects.

Illustration of variations of a number. *4* may be analyzed into the following: —

4×1 (four ones), 1×4, $4 \div 1$, $4 \div 4$.
$3 + 1$, $1 + 3$, $4 - 3$, $4 - 1$,
$2 + 2$, $4 - 2$
2×2, $4 \div 2$
$1/2$ of 4, $2/2$ of 4
$1/4$ of 4, $2/4$ of 4, $3/4$ of 4, $4/4$ of 4

All this should be learned according to Grube, before *5* is studied, and complemental facts are thus taught together.

Comment on the Grube System. The system of analysis is too complete and logical for the mind of the young child. It will take quite a while to learn all the facts of *2*, *3*, *4*, *5*, *6*, *7*, and *8*, and it seems unreasonable not to learn *9* and *10* before *8* is so completely analyzed. Though the system for quite a while claimed all modern schools and textbooks, it has since been modified in many particulars, and largely abandoned as a method of instruction in arithmetic.

A study of this system will exhibit to the teacher the number of facts which must finally be taught for any number, though the order of teaching these may be changed.

The Rational System. This system grew out of principles

developed in Dewey and McLellan, *Psychology of Number.*[1] The method presented therein has been styled the Rational Method. Some of its principles are here given.

1. Number is considered as ratio, not as a mere collection of fixed units. It is claimed that the fixed-unit idea of the Grube System has been harmful. Number arose through comparisons, hence is ratio. Some unit like the yardstick is applied to the length of the room, and it is contained six times. The idea *6* is a number idea, and is the ratio of the two lengths. This would make number abstract. What has been called concrete number, as *8 yards*, *$5*, etc., is *measured quantity*.
2. Number originated through measurement; hence the measuring idea is the sure guide to teachers. The mere counting of objects is not sufficient.
3. Nature presented to man quantities to be measured; man had to learn to measure; and thus the number idea arose. Quantity and number, the *how much*, and the *how many*, are correlatives.
4. Through measurement a variety of units is emphasized, and the idea of a fixed unit avoided. The unit is now a yardstick, next probably a pint measure, and again a pound weight.
5. The Rational Method works from and within a whole quantity, not recognizing the necessity of an exhaustive analysis of one number before using the next higher.

The Speer System and modified systems of developing number through comparisons of lines, geometrical figures, including solids, are attempts at a rational system. These have not gained the popularity once had by the Grube Method.

The Rational System has many good points. It gives new

[1] Dewey and McLellan, *Psychology of Number.* (D. Appleton & Co.)

viewpoints, widening the Grube visions. Its notions of number and number origin are sound. A study of it will help any teacher. It provokes great interest on the part of children.

It seems that we need to do here what we have done with the various beginning methods in reading: choose good points from each and make a combination method. It costs money to purchase a set of Speer blocks. A few may be sawed to measure by some of the boys in manual arts. Then, to save blackboard time, some pages of the chart made for reading may be used for lines, squares, rectangles, triangles, etc., for this number work. Pupils may be set to discover relations, just as they did Grube combinations with objects.

Every school should have a pair of balances with weights, a set of dry measures with sand to measure, yardsticks, tin money, imitation paper money, clock faces with hands, a teacher's box of objects, and individual objects for the pupils.

Characteristics of modern method. The new method calls for measuring, weighing, comparing, and thus counting and learning combinations. Instead of the old method's way of separating topics, to be taught independently, fractions, denominate numbers, and the various processes — addition, subtraction, multiplication, and division — are all taught together from the beginning. Correlations should be made with other school subjects, and the problems should prepare for efficiency in everyday demands.

Demands on rural-school arithmetic. This last means that rural-school arithmetic should deal with real, practical, reliable information of farm life. There should be corn problems, cattle and hog problems, garden and fruit problems, household-expense problems, cooking and sewing problems, building and furnishing problems, general financial problems, and problems of all other phases of farm life and farm

management. The examples in the primary classes should largely be colored with just such notions. Whatever the book used as a text, it should be freely supplemented along these lines.

It is generally slow work to change textbooks from an old line to a reformed one, yet the response to these rural needs is coming good and strong. Some excellent rural arithmetics have been published, and others are rapidly coming. A list of some will be given at the end of this chapter. It seems that it is now left to the teacher to fall in with the new movement, and make of arithmetic one of the important school factors in adapting children to successful and happy life in the country.

However, we must not lose sight of the fact that arithmetic is the science of calculations; that the science must finally be taught in its elements; that there must be drills for efficiency, drills in adding columns, in long division, in pointing decimals, in facility and accuracy in everything. Here is no place for slipshod, loose thinking or doing. Drill cannot be entirely eliminated, but the modern method simplifies and shortens arithmetic, makes it more practical and interesting, furnishes motives for good work, and thus reduces drill to the minimum.

II. Brief Outline of the Arithmetic Course

Plan of the course. Very little number work need be done *the first year*. No definite amount should be assigned. The amount done should depend upon time and the development of the class. Something can be done every first year. The children may learn foot, inch, yard, pint, quart, gallon, days in the week, months in the year, coins of money, dozen, and half-dozen. They will delight in playing store, milkman, or truck-sellers. Thus they may learn to count to 100, to read

and write to 20, to add and subtract simple numbers not over 20, and fractions 1/2 and 1/4 to 1/2 of 10 and 1/4 of 8. 1/3 may or may not be taught. If much use of the yardstick is made, the foot as 1/3 may be taught. The use of the footrule and the yardstick makes 12 an easy number to work with. The signs are quickly learned as abbreviations. Number plays and counting scores will stimulate to good results.

The second year will extend the work in a similar way. More drills this year on combinations in abstract problems and columns of figures. Carrying may come in the latter part of the year. The tables may be learned through the *5's*. We have known second-grade children to go farther, with apparently good results, but it is better to err on the side of too little than too much of abstract number work during the first two years. Drills may develop excellent rapidity in adding two numbers, then columns of three figures, subtraction, multiplication, and partition within the limits of totals they have learned. Devices with certain figures in a circle or at star points, and a figure written in the center to add to any figure pointed out, to subtract therefrom any figure designated, to designate products or quotients, are good devices. These and other drill forms add variety to drills which will keep up interest as well as make the drills more effective. Number equations, with one place vacant to be filled, make good practice. Cards for sight work and for seat work are valuable. These may be made in quantities on the mimeograph. The pupils may copy the cards and return them, which will keep the teacher's supply from depleting too rapidly.

In the third grade systematic arithmetic may be begun. Regular reading and writing of numbers and the formal methods of the fundamental rules are now to receive attention. These with their applications also to the handling of

fractions will constitute good work for *the third and fourth years*. An elementary textbook should be used. Alternation with these two years is not advisable, since certain things must be taught first and the maturity of the children will count. In teaching notation and numeration, decimal fractions may be taught up to three places. In addition and subtraction decimals may be used. Familiarity with the decimal system, the same for fractions as for whole numbers, and keeping the decimal point may be inculcated from the start. Multiplication and division with decimals in the multipliers and the divisors should be deferred to the fourth year. But with integral multipliers and divisors, some familiarity with decimals comes with problems involving dollars and cents.

The task should be set for the third and fourth years to reach proficiency in the fundamental rules and fractions. The problems should be as real and practical as can be found, and the drills should be constant and vigilant.

In the fifth and sixth years alternation may be used to combine the classes. The work one year may be in the field of mensuration and proportion, the other year in the field of percentage and its applications.

In connection with the fifth and sixth years' work the work of the third and fourth years in the fundamental operations and fractions will be extended and strengthened. It may seem to many that the work assigned to the four lower grades is too much for them. But keep in mind the simplicity of the proposed arithmetic. In the first year the number work need not be given, except incidentally, but children enjoy a little of it if given in concrete form. What is not accomplished in learning the tables in the second year may be completed the third year, and much may be done in the fundamental operations the third year, though many schools postpone this still later. If circumstances keep the

class back, then the topics here assigned to the fifth and sixth years may be used with the sixth and seventh years. In this case a book of farm arithmetic should be used in these grades.

However, with the simplification which should be made, the essentials should be well grounded in the fifth and sixth years through teaching mensuration and percentage applications.

The seventh year, or the seventh and the eighth alternating, may then, in connection with the study of agriculture these years, use one of the special agricultural arithmetics, some of which are listed at the end of this chapter.

Induction. In teaching a new topic induction can nearly always be used to advantage. The extra time taken up for the inductive introduction will be more than regained in increased rapidity possible with the clearer understanding of the nature of the new processes.

Interpretation. In the solution of problems one of the first steps is to secure a clear understanding of the problem considered. Pupils should look through the problem, then state its meaning. Suppose the problem is, "When 28 acres of land sell for $2688, how much are 21 acres worth at the same rate?"

What is the relation of 21 to 28? The cost of the 21 will be what part of the cost of the 28? Find it.

The pupils should be able to state clearly what is to be found, what are given, and the method of relating the two.

Oral, or mental, arithmetic with typical problems will aid in interpretation and systematic solution. Every few days have some problems for quick oral solutions. Some older text for mental arithmetic may be used as a source of problems.

Steps in solution. There are often different ways of solving a problem. Some general plan of attack should become habitual.

1. Note what is to be found.
2. Note what are given or known.
3. Devise the plan to pass from the given to the wanted. Note the relation of the wanted to the known, and this may suggest the plan of solution.
4. Check up in some way to test the answer found. It is important to get children in the habit of testing.

Miscellaneous problems. Groups of problems coming under various cases should be used often as review practice. The exercise thus given in assigning each problem to its right class is valuable for pupils. Written tests should frequently be given when problems not before seen are presented for impromptu solution. These will lead to skill in application.

Types of arithmetical skill to strive for are in *calculation*, *interpretation*, *application*.

QUESTIONS FOR DISCUSSION

1. What is the chief reason for arithmetic in the schools?
2. Take the arithmetic in use and mark all the problems which are of a kind not needed by your pupils. Can you eliminate any whole topics?
3. What practical examples would you add as better ones for rural life? Make such a collection for use in primary arithmetic.
4. What are the advantages and the disadvantages of alternation by years with the classes in arithmetic?
5. Should arithmetic be taught as a separate study, or may it be better learned through correlations? Discuss.
6. How can you use supervised study so as to keep the bright and dull all profitably busy in the same arithmetic class?

BOOKS FOR TEACHERS

1. Method Books

McMurry, Chas. *Special Methods in Arithmetic.* (The Macmillan Company.)
Smith, D. E. *The Teaching of Arithmetic.* (Teachers College, New York.)
Stamper, A. *The Teaching of Arithmetic.* (American Book Company.)
Suzzallo, H. *The Teaching of Primary Arithmetic.* (Houghton Mifflin Company.)

2. For Method and Material

Brooks-Belfield. *The Rational Elementary Arithmetic.* (Scott, Foresman Co.)

A modified Speer System. Good.

Speer, W. *Primary Arithmetic.* (For Teachers.) (Ginn & Co.)
Hoyt and Peet. *The Everyday Arithmetic.* (Houghton Mifflin Company.)
Stevens-Butler. *A Practical Arithmetic.* (Charles Scribner's Sons.)

This has many problems based on the problems of real life. It aims to be a complete text for elementary grades.

3. First-Primary Helps

Gibbs, *Natural Number Primer.* (American Book Company.)
Harris-Waldo. *First Journeys in Numberland.* (Scott, Foresman Co.)
Hoyt and Peet. *First Year in Number.* (Houghton Mifflin Company.)
Wentworth-Smith. *Work and Play with Numbers.* (Ginn & Co.)

4. Special Rural Arithmetics

Calfee, J. E. *Rural Arithmetic.* (Ginn & Co.)
Lewis, C. J. *Farm Business Arithmetic.* (D. C. Heath & Co.)
Madden and Turner. *A Rural Arithmetic.* (Houghton Mifflin Company.)
Shutts and Weir. *Agricultural Arithmetic.* (Webb Publishing Company.)
Stratton and Remick. *Agricultural Arithmetic.* (The Macmillan Company.)
Burket and Swartzel. *Farm Arithmetic.* (Orange-Judd Company.)

The above special texts are comparatively new and very good. They are mainly planned for seventh- or eighth-grade classes, though they may be used in the sixth and seventh, and suggestive problems may be found for lower grades, or to supplement the text for grades six to eight. Every rural teacher should have one or more of these. The first two are probably a little more elementary than the others.

280

CHAPTER XVI

ELEMENTARY SCIENCE AND AGRICULTURE

Recognition of values. In nature study and agriculture we come close to the heart of rural life. In the elementary school the value of science is not for science's sake, but for its usefulness. There may be in the college or university some place for pure science; science in the elementary school must be for its applications. Agriculture comes to the front as such a great factor in rural life that we are logically forced to the conclusion that its science is paramount, and that in any preparation for life in the country agriculture must be given a prominent place. We reached this conclusion years ago; agriculture was prescribed as a common-school study; and yet it has made but little headway in getting into the vital work of the majority of rural schools. And nature study, the rich handmaiden to agriculture, has had a stiff, formal introduction or has been ignored in this majority. These subjects have lacked organization, such as arithmetic or grammar has; the textbooks written have often failed to be adapted to the child or to the school organization; and the teachers have not come up through these as through the older subjects, hence are hesitant about taking up an unfamiliar field.

But these difficulties are melting, the subjects are pressing, and nearly every *State Manual* now gives large place to their treatment. The United States Department of Agriculture is endeavoring to stimulate the study and practice of agriculture through boys' and girls' club organizers and other extension agencies. Congress is endeavoring to extend the aid of the National Government to vocational education in the

common schools. The most extensive and fundamental vocation is that of agriculture, which will be greatly advanced by governmental aid. It remains for the local authorities and the teachers to wake up to a realization of its great value.

Nature study is the beginning of agriculture, and the agriculture of the common schools is agricultural nature study. These studies have a practical value, bearing on the great part they play in earning a livelihood in the country. They have great æsthetic value. The child has a nature instinct which leads him to revel in the beauties of the leaves, butterflies, birds, fields, forests, and streams. He has a call to nature and primitive life, and much can be done to cultivate his æsthetic imagination and his love of the beautiful in nature. Poets of all ages have been inspired by nature, and their writings are sources of great joy for those who have developed the appreciative spirit.

Moral and religious value of science. These subjects have a moral and religious value. In caring for plants and animals, especially flowers, gardens, and pets, the altruistic has a field of development. Contact with nature and domestic animals makes for that stability of character that city people are losing. Furthermore, the rational foundations of religious belief are laid in an abiding interest in the works of God. Necessity for a Creator may be shown. There is evidence of immeasurable power, transcendent wisdom, and supreme goodness everywhere manifest. Mighty forces come from the sun. But who endowed the sun? Food, air, sunshine, and water are here in proportion to our needs. Who ordained it so? Behold the adaptability of structure in plant and animal, due to years of endless creation. Who arranged it so through all these ages? "The heavens declare the glory of God and the firmament showeth his handiwork."

"In wisdom thou hast made them all; the earth is full of thy riches."

We need not expand the training value for habits of observation, for discerning relations, and for constructive imagination, since this much is generally conceded. If "life is response to the order of nature," and if the function of education is "preparation for complete living," then we must bring children to know and to appreciate nature that they may secure that response which will bring the higher and more complete life.

Man's racial evolution. The parallel between the development of the child and the race is here again suggestive. The early lessons of primitive man were the lessons taught by nature, and learned through ages of strenuous experience, yet these lessons brought a development not surpassed by that since history began. What was the character of this education?

1. Primitive man had to learn to outwit, conquer, and finally domesticate powerful and useful animals.
2. He had to learn early the use of plants for food, skins and plants for clothing and shelter, and care of self for health.
3. He had to find out how to make and to use weapons, tools and utensils of wood, stone, bone, and metal.
4. He gained a knowledge of the elements and of the heavenly bodies as clocks.
5. He learned the value of certain soils and climates, of home, and of community life with human coöperation.
6. He early learned to express himself through drawings, etchings, colorings, and artistic work in ivory and pottery.

This early education brought marvelous results before letters and books. Man learned from outside nature. Man has divine commission to "subdue the earth and have do-

minion over every living thing." There are several steps in this: (1) Domestication of animals. (2) Cultivation of the soil. (3) Control of the elements. (4) Dominion over self. "And the last enemy to be overcome is death."

There could be no effectual cultivation of the soil without domestic animals, such as the ox and the horse. Man ceased to be a wanderer, and began to develop civilized institutions when he settled down to the cultivation of certain fertile spots. Then came home, country, specialized labor, inventions, exchange, art, letters, science, and spiritualized humanity.

A parallel evolution in the study of nature. Out of a review of man's racial development we get these suggestions for the first steps in nature study: —

1. Sympathetic interest in animal life, especially animals as related to human interests. (Pets, useful animals, pests.)
2. The soil, its cultivation, plants, etc. Competitive growing of plants and flowers is good to bring children to observe natural laws, and to become interested in growing things.
3. Observation of the sun, moon, stars, weather, and natural laws. (Physics, chemistry, hygiene.)

These open up the channels of elementary agriculture which are the following: —

1. Animal industry and animal pests. (Pigs, poultry, cattle, insects.)
2. Agriculture in its literal sense, field culture. (Corn, tomatoes, potatoes, wheat, hay.)
3. Gardening, flower and fruit culture.
4. Home-making. And this may be extended to include site, buildings, sanitation, cooking, sewing, embroidery, decoration, recreation, and community coöperation.

I. Elementary Nature Study

Methods. The first step must be an orderly planning of topics for sequences of study. There should be some organized plan for a progressive course of study. No fixed course of study has been agreed upon by any two writers of nature-study manuals, nor is a fixed course of study desirable. The selection and presentation of topics must vary for different sections of the country. In Florida snow does not fall nor do the robins build their nests. In Michigan the orange and the cotton blossoms are not convenient specimens. Specimens must vary, too, somewhat according to the character of the school, the one-teacher school having to limit the topics and the field trips, also to keep alternation in mind. Some suggestions on the course of study will be offered farther on.

Guiding principles in selection. In selecting what to do in any school the following guiding principles may be given: —

1. The specimens selected for study should belong to the immediate surroundings. The lessons are not to be mere information lessons about objects in any land, but are to lead the children to interpret the out-of-doors, to appreciate the beauties of their environment, to have eyes and to see. The indoor lessons should be to arouse interest and to stimulate outside observations and applications, or to discuss what has been observed in a field trip with the teacher, or in a quest following directions. The child is to be brought into sympathetic and intelligent relations with his real environment, and then his horizon is to be broadened.
2. There is an embarrassment of riches from which to choose, some 300,000 species of animals, and 200,000 of plants. As in geography, the solution lies in type

studies. The specimens should be types of important groups. A few types may give a fairly good idea of all. The classifications in botany and zoölogy will aid in selections from groups, — insects, amphibia, birds, mammals, etc. Elementary principles found in some recent book of general science will guide in the inorganic work of natural laws. A teacher can easily work through these books, even without having studied them in school or college.

3. The specimens should, as far as possible, lead to valuable observation and application to the practical affairs of life, or to an appreciation of beauty or fitness.

The cornfield pea takes nitrogen out of the air and puts it into the soil, whereas the farmer must pay high prices for nitrogen in commercial fertilizers. Certain common insects are destructive or dangerous, and these should be recognized in any stage of development. The value of birds and toads stamps these as useful specimens.

Methods of study. The second step is one of observation of the specimen under study. First, the teacher should find out what the pupils have seen, then guide them to see more. Skillful questioning will do this in an inductive way. Some of the principles of study given under picture lessons will apply equally here. The observations should be *orderly*. Children will naturally have a tendency to see things in a haphazard way, without logical connections. To overcome this the teacher's questions must be planned in order. Leading questions need to be prepared in advance, due consideration being given to any questions of children as the lesson proceeds. The observations should be *thoughtful*, the pupil interpreting properly what he sees. The questions need to be thought-provoking, the *why* often in evidence. The observations should be *complete*. Pupils should not stop until they have seen all they ought to see. A definite plan will be

needed for this, one with a beginning and an end. Let the life story of plant or animal stand out. What can it do and how is it fitted to do it.

The third step is proper expression. All the various forms should be cultivated, but especially oral and written language, drawing, cutting, and modeling. Have oral descriptions and life stories, with occasional written lessons. Encourage drawing of leaves, flowers, animals, trees, anything studied. Have these as a matter of course, not as regular drawing lessons, yet they will be the best of drawing lessons. Leaf, flower, and animal forms may be cut in paper, or pricked and embroidered. This is good industrial busy-work in correlation. Outlines for embroidering may be had from any kindergarten supply house, such as the Milton Bradley Company.

Correlating the work with other subjects. Pictures and literary gems should be brought in, the artist and the poet thus helping the child to appreciate the beautiful. Free use of memory gems from literature at appropriate times is valuable. The reading of inspiring books is to be recommended. Such are the works of Burroughs, Seton-Thompson, Thoreau, Johannot, Miller, Wright, and others.

Lessons need to be planned with seasonal fitness, though not all can be so planned. When winter prevents many outdoor observations, the greater amount of the time may be devoted to physiology and hygiene, the emphasis shifting to the other topics in fall and spring.

About the latter part of November celebrate Arbor Day and plant trees. Encourage children to plant at home also. About April 1 have a Bird Day.

Organize, with the primary children, flower, plant, and garden clubs corresponding to the agricultural clubs of the older ones. Have winter bird clubs for feeding birds in cold climates. Let the smaller children enter the competitive

exhibits, as in the case of the other clubs at a school fair. Have pupils make individual collections for exhibition.

Correlate nature study with language, drawing, modeling, geography, memory gems, physiology, and agriculture. Autumn leaves are excellent to be drawn in outline, then colored, or cut in paper and colored. A blue jay is a fine model for drawing and color; so is a peach blossom, and later a spray of blossoms, then a tree in bloom. Butterflies, tadpoles, toads, bare trees, various fruits, and countless other things are excellent subjects. Map-drawing of local places leads to landscape sketching. Charcoal, pen, and brush may gradually come in.

For modeling in clay or putty, an apple, a peach, a tomato, or an animal form are all good models.

The making of weather-vanes, windmills, waterwheels, bird-houses, insect-cages, fly-traps, cold-frames, screens for windows and doors, beehives, aquaria, fireless cookers, refrigerators, siphons, and many other things correlated is the best kind of handicraft.

Suggestive material. In the first group for alternation will be grades one and two; in the second group, grades three and four; in the third group, grades five and six; and in the fourth group, grades seven and eight, if there is an eighth grade in the elementary school.

1. Grade One. In the fall a study of leaves. A collection of autumn leaves arranged according to shape. Have some drawn in outline and colored. Falling of leaves. Evergreen trees. Compare typical local trees, such as hickory, pine, elm; note form, parts, arrangement of buds, fruit, habitat. The second year take oak, walnut, etc.

The dog, rabbit, and squirrel are convenient subjects, beginning with the dog. The cat is a good substitute. Have a gentle dog brought in for several days' study. His feet, claws, dew claws, and limbs are interesting to begin with.

Compare with hands and limbs of man. Study teeth, hair, ears, nose. Have pupils tell of his habits and of different kinds of dogs. Why do poor families often keep so many dogs? If it is not convenient to have a dog present for study, the next best plan will be to give them some things to find out about at home and talk about next day.

Then, if a gentle rabbit can be kept about the school for a few days of similar study and comparison with the dog, this will be a good lesson to follow the dog. A squirrel will next be of interest, though he cannot be handled like the others. Properties of fur, hair, etc., food and care of domestic animals, and their use to man are valuable topics. A chicken also forms an interesting and practical study.

Preparation of plants and animals for winter. Collect cocoons, and keep these in cool places for spring observation.

2. Grade Two. The second year study grass-eaters, such as the horse, cow, sheep, and goat. Have a cage covered with netted cloth. Collect some caterpillars and "green worms" to feed in the cage until they make cocoons. Collect other cocoons.

In the winter pass to man's protection against the cold of winter, his food, and its digestion. Study skin, hair, nails; their uses and care. Cleanliness, clothing, houses. Primitive houses and dress.

The second year may continue with primitive and modern methods of making fire, cooking, grinding, etc. The teeth, construction, use, care. Proper way to eat. Foods, digestive system, circulatory system. The sun our great giver of heat and light.

Begin an interest in winter birds. Some should be fed, made gentle, and observed.

For the spring the first songs of spring's return should be noted. The cocoons should be put in the cage to develop,

and the moths and butterflies noted. Drawings should be made of the cocoons, then of their respective insects.

The coming of leaves and flowers should be noted. Which come first in the elm? The maple? The dogwood? The cherry? The apple? Collect spring leaves to arrange according to veining.

Study flowers, parts of, falling parts, the remaining fruit. Uses of flowers. Uses of leaves. The return of the birds. Their nesting, eggs, and young.

These are a few possible topics to suggest beginnings. In the winter there may be a study of apples, oranges, and nuts. In the fall a collection of seeds and nuts, each child to have a seed box. In the spring some of these seeds are to be planted and observed. A very full array of subjects well arranged can be found in Holtz's *Nature Study*, from which the rural teacher may select. The program given by Holtz is so full that it may be confusing at first, hence the attempt to indicate here some simple beginnings. However, in the course of time, the full array will be very helpful as a source to furnish variety yet keep orderly.

In these first primary grades the children should become somewhat familiar with many things in their environment, so as to recognize common leaves, trees, birds, flowers, butterflies, moths, etc. They should by this time have an active interest in outdoor life, a sympathetic attitude toward useful animals and plants, and an appreciation of the world of beauty. The life stories of a few animals should be known. Some plants should be studied in a similar way. The dandelion is a wide-spread plant, interesting to study in early spring. Its leaves show the teeth of the lion; hence its name, dan-(*dens*)de-lion. Its nightly behavior, its flowers, its peculiar seeds and their mode of travel, and other features make it valuable as a study. It is excellent for drawing and coloring. In the Middle West it is a troublesome weed.

Some common garden vegetable, probably the bean or pea, may be studied from the seed to fruit, and something of weather and seasonal changes noted, along with their effects upon the behavior of animals and plants.

All this should be done largely informally, inductively, and as foundations for lessons in reading, language, drawing, and modeling.

3. Grades Three and Four. These are grades for the geographical nature studies partly outlined under primary geography. Much additional may be brought in by correlation. Further studies of cocoons and chrysalids, with their corresponding larvæ and adult insects, should lead to more ready recognition of these in any stage. An aquarium will be of interest. This may be used in the fall for fishes, and in the spring for tadpoles. Some animals connecting up with the geographical studies will be the earthworm, the snail, the crawfish, the toad, the dragon fly, the mosquito, the crane, the snipe, the wild duck, and the animals of higher up the slopes. Some pictures and stories of animal life in various regions of the world, and some insight into how all these are adapted to their homes, will add much to the building of interests.

Outline of work. Two outlines of possible type studies are given to show method and plan for this work.

I. Outline Study of the Earthworm (Type of Worm)

1. *Haunts and habits.* Where have you seen earthworms? Where can you find them now? What have you ever seen them do? When do they come out of the ground? Did you ever see a bird try to pull one out? Did you ever try the same? How does it hold on? Can it climb?
2. *Its body.* Specimens should be obtained and distributed for study. The room should not be too hot and dry. Slightly damp paper on each desk will serve to hold the specimen.

Note the body carefully. How long is it? How does it

travel? Try to make it go the other end foremost. Leave it alone again; which way does it crawl? Draw the inference, head and tail ends. Are both ends exactly alike? Tell any difference. Roll it on the other side. What did it do? Will it crawl with the same side up every time? Can you see any difference between sides? (Upper and lower sides.) What else do you see about its body? (Rings, collar, veins, etc.) Where is its mouth? What will it eat?

3. *Sensation.* Has it any feeling? Can it see? Will light affect it. It will crawl around a leaf, then turn the small end of the leaf toward its hole and drag in that end first. How is it able to do so well? (Instinct.) To use feeling and instinct thus it must have a nervous system. Explain its brain, spinal cord, and ganglia.
4. Have you ever seen young worms? Are they at all like old ones? Hatch from eggs?
5. *Uses.* (*a*) Its piles of castings brought out in making its hole. Plough soil; nature's first ploughs. Average of about ten tons to the acre brought up this way. Soil-maker. (*b*) Holes for roots, water, air. (*c*) Leaves enrich soil. (*d*) Cover seeds.
6. *Adaptations.* How is it adapted to its life? (Shape, eyes, bones, legs, slime.) Draw a worm. Draw a bird pulling a worm out of its hole.

Darwin's *Vegetable Mould and the Earthworm* is good to read for this study.

II. Outline Study of the Toad (Type of Amphibian)

Compare with crawfish and earthworm. Is a vertebrate. What other vertebrates? Is an amphibian. What is that? What others?

Are any toads found around here? When? They come from where?

1. Some of them out of the ground. (Hibernation.)

The toad is a cold-blooded animal; its blood changes temperature with its surrounding air. When air gets too cool, the toad becomes stupid, inactive. It goes into a kind of death sleep in which it hardly moves or breathes. Do you know of any other cold-blooded animal? Any other hibernating animal? In the garden sometimes lizards may be forked up.

What does the toad do to get ready for this sleep? Watch

one dig in backward sometimes. What wakes it? What does it do then?

2. Some of them come out of the water. (Cycle of life.)

The toad lives on land, sometimes far from water, but the early part of its life was spent in water. There is where we must look for its eggs. Look for some about ponds in April, or when you hear the frog chorus of a spring evening. How does it make that noise?

Can you tell toad's eggs from frog's eggs? (Toad's in strings or egg ropes; frog's in bunches. The black spots are eggs in the slimy ropes.) Get toad's eggs, since these develop faster. Place some in a basin of water from some pond and transfer to schoolroom aquarium. If weather is right, they will hatch in two or three days. What is the young toad called? What is it like? Compare in this respect with young of worms and crawfish. Watch one several days and see if it likes to stay under water all the time. How does it breathe under water? (Like fish.) Describe its actions as it grows older, and account for them.

Tadpoles may be brought in for the aquarium. Toad tadpoles are dark, frog tadpoles are lighter gray. Get toads.

Watch carefully when they are from four to six weeks old. Legs begin to grow. Which first? Shape changes. What becomes of tail? (Absorbed; does not drop off.) Finally one is transformed into a toad. After a warm rain, have you seen many little toads? Some people say they are rained down, but not so.

What will an adult toad eat? Any flying, creeping, crawling thing it can swallow, — fly, caterpillar, spider, worm, wasp, etc. One has been seen to eat twenty-four caterpillars in ten minutes; another to catch and eat thirty-five celery worms in three hours. One will eat ten thousand insects in a year. Put one in a flytrap containing many flies, and watch it eat them. How catch them? Its tongue is fastened at the front end and folds back in mouth. It throws this out and flirts the fly back. Its tongue is sticky also.

How is it a friend to man? To the garden? Why not put many in the garden? Does it do harm? What are its enemies? Should you be enemy or friend?

After hibernating two or three winters the little toad becomes a big one. Some spring when it awakes from a long sleep, it has a longing to get back to the pond where its life began. It finds water and

lays a great many eggs, perhaps a thousand or two, some in horse tracks, some in rain pools, some in larger ponds. Will these all hatch and live? Some pools quickly dry up.

After laying eggs, its cycle of life is complete, though it may live seven or eight years longer.

A leaflet on *The Toad*, published by the Cornell University Bureau of Nature Study, supplied much of the above outline.

These are suggestive inductive studies to indicate a method of gradual inquiry to prompt observation and a growing insight into natural life. These are worth far more than book studies. Nature stories and nature readers may accompany to advantage, but they should never supplant first-hand lessons with real nature, where pupils see and discover for themselves.

The plant lessons of these two years may center in and around the garden, yard, and places visited in excursions. This is the time for school-garden plots for each child, to prepare for the club work to follow at home.

Meier's *School and Home Gardens* is a valuable handbook for teachers.

A fuller list of topics arranged for the seasons will be found in Holtz's *Nature Study*.

The correlation in physiology and hygiene may be the following: Lungs, respiration, bodily heat, hygiene of breathing, ventilation and heating. The voice and its organs. The nervous system and the organs of special sense. Adaptations and hygiene of the nervous system. Comparisons with other animals studied. Do plants breathe? Do any plants behave like nervous beings? (Sensitive Plant, Venus Fly Trap, etc.)

4. The upper grades. Similar general studies may be carried on into the upper grades, and including some simple studies in physics, such as sound, heat, light, and electricity. A few simple lessons in astronomy can be given with ad-

vantage, and Miss Pratt's *Storyland of Stars* (Educational Publishing Company) forms an interesting reading book for fifth and sixth grade children. In rural schools, though, the upper grade work should culminate largely in agriculture for both boys and girls, the girls omitting some of the work of the boys and bringing in other forms of science study in the work in domestic science. School gardening and boys' and girls' clubs work well in the fifth and sixth grades, and more intensive studies of birds, insects, weeds, soils, and agricultural topics in the seventh and eighth.

II. Agriculture

The teaching of agriculture. In the congested condition of classes in a rural school, with but one or at most only a few teachers, it has seemed difficult to arrange time for teaching agriculture in a satisfactory way. Yet the need is very great, and it is practicable to teach the elements. This is not best done merely through teaching an elementary textbook in the highest grade. If such a book planned for one year's work is adopted for use, it must be divided into topics selected for each of two years, for alternation, and the topics of each year supplemented by bulletins from agricultural colleges, from the United States Department of Agriculture, from state normal schools, and from other sources. Fortunately these are not only multiplying in number, but are being written in more suitable language for children. There are also many supplementary books of great interest and value now to be found in nature study and many phases of agriculture.

Nature study leads up to and supplements the textbook in agriculture. Then, not to be neglected, club and home practice in connection with the topics being treated in school is of highest value. The teacher need be only the

inspirer and director, giving a few hours each week to two or more groups of pupils. The textbook, with other topics arranged so as to give a systematic treatment of the leading phases, may be used for alternation with the two upper classes, the sixth and seventh, or the seventh and eighth, reciting together. Below this there may be alternation with groups of clubs. Nature study should be continued throughout. Language, arithmetic, spelling, drawing, handicrafts, and geography lessons may all grow out of the lessons in agriculture, hence through correlation time may be gained. The teacher should not fail to make such beginnings as are possible and gradually extend the work, for ways will open.

School gardens. In many cases school gardens as undertaken in the past have been failures. They will be of greatest service where the school has a principal's home on an acreage of school land. However, if there is any land which may be used for small plots, the younger children should each be given a plot for growing some spring vegetables and flowers. Four feet by eleven feet is a convenient size for each plot, with walks two feet wide between. This size contains a thousandth part of an acre, which will make calculation easy for determining the amount of any fertilizer, and for comparing yields. If the fertilizer directions call for one-half ton per acre, this would be one pound for each plot. These plots could be used with the little folks for practice in planting, germinating, and caring for certain standard things easy to grow. The plots may be staked off and assigned in the fall, and each instructed in clearing off, mellowing up, fertilizing, etc., to be ready for spring. In the spring, a list of seed packets may be given each one, to procure seed through home orders, or the cost of each list may be brought to the teacher to order for the group. The pupils then should be told when to mellow up the plots, when and how to plant

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each kind of seed, and how to hoe and water the crop. Prizes may be offered for all plots nearly perfect.

For the older pupils such plots could be used for experiments to compare different varieties, or to compare results under different treatment in preparation of soil, in application of fertilizers, and especially in noting differences with selected seed in one plot and random seed in another plot. These experiments could be made valuable only in so far as the time of the school term would permit, but something could be accomplished in the spring of every year. Even if there is no ground for such plots, something may yet be done with flowers and shrubbery in the school yard, and in pots and window gardens. Bulbs in glasses make growths interesting to observe, and furnish lessons in school to be repeated at home. Hyacinths, Chinese Lilies, and Narciss are good types. Decorative pot plants may be similarly treated. Pupils should be encouraged to duplicate at home some of the school illustrations. Bulbs, flowering plants and decorative shrubbery should be treated in the schoo yard, not only for beautifying the school yard but for illus trative lessons to be applied in home yards. Pupils may thus learn varieties and treatment, and may have thei æsthetic natures developed to appreciate more highly th joys of life thus attainable.

Boys' and girls' clubs. One of the most valuable helps i the teaching of agriculture has come through the Unite States Department of Agriculture, with its forces aiding i the work of forming boys' and girls' clubs. This movemer started as a state-wide movement in New York State u der direction of Cornell University, about 1898. Later t United States Department of Agriculture, through exte sion workers in the Southern States, stimulated the organ zation of boys' corn clubs. The Department supplied t seed, to make sure of the first essential, and each boy w

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entered a club pledged himself to cultivate one acre strictly according to directions furnished him in bulletins and otherwise through visits from the extension agent or instructions from the teacher. Some results were astounding. In States with an average corn yield of from twelve to fifteen bushels per acre, young boys raised over one hundred bushels per acre, many going as high as one hundred eighty, and the prize over all went to a boy in South Carolina who secured over two hundred. This was probably the most convincing argument that has ever been made for scientific agriculture, and it opened an inviting door to every rural school in the land, especially to the one-teacher school with such limited time for agricultural lessons or school gardens, or with no facilities for school gardens.

Types of clubs organized. Under the continued coöpertion of the United States Department of Agriculture, with its extension workers in the States, the club idea has spread well throughout the South, where the first experiments were tried. Beginning with corn clubs, the projects have extended to cotton clubs, pig clubs, cattle clubs, and four-crop clubs, mostly for boys. Not to neglect the girls, clubs have formed for cooking and sewing, for poultry raising, for gardening, and for canning. These clubs are not limited exclusively to either sex.

Other States have of their own initiative organized widely for club work, usually without the coöperation of the general government. New York, the leader, has probably one hundred thousand children in these clubs, and leaflets giving directions are sent to several thousand teachers. Ohio, Nebraska, and Oregon are examples of other States with state-wide organizations.

The general plan for these clubs. The general plan is to begin with corn clubs for boys, and tomato and canning clubs for girls. These may begin with children about ten

years of age. Pig clubs, or dairy clubs, or poultry clubs, or home economic clubs may follow. Garden clubs may be berry clubs, fruit clubs, four-crop clubs, or general gardening clubs. The opportunities are many. The caution needs to be given not to start too many at one time, but be very thorough-going in a few, and vary from year to year.

Organizing a county. These clubs cannot be a great success operated by the general government and the agricultural colleges independent of the schools. It is best for the clubs and the schools that they merge their interests. The county superintendents are in best positions to organize for the counties. Before the school term opens the plans should be explained, and directions put in the hands of the teachers to give to pupils. Then the pupils of about ten to twelve years should be encouraged to join the primary clubs, probably corn clubs for boys, tomato clubs for girls. Bulletins from the United States Department of Agriculture and state institutions should be secured for use. These should be distributed, as needed, and meetings, at least weekly, should be held for the discussion of the bulletins and problems arising. The pupils are to secure the land at home and carry out instructions raising the crops. A county school fair is generally held, where results are exhibited and prizes awarded to individuals and schools. Local fairs may first be held, and also the winners in the county fair may be sent to the state fair.

Independent organizations. If a county superintendent does not organize his county, any school or district may take it up independently, and if other counties have organized, this school or district may send exhibits to the state fair. No school need be debarred. The teacher has the opportunity of teaching agriculture through the organization of these clubs, explanation of the bulletins, and holding school exhibits. Extension agents may often be called in to assist

in explaining bulletins and giving directions. The extension agents should always come merely as teacher-helpers, and these agents should know and be in sympathy with teaching and teachers' problems. Some such agents are chosen merely as agricultural experts, and a few of these have at times caused friction. On the other hand many teachers have not appreciated the opportunity at their door, and have not been helpful in the club work. There is no good reason why there should not be an admirable spirit of mutual helpfulness.

Advantages of the project method. This club project method has many advantages. It carries education into life's activities. It goes further than mere lessons in school or experiments on somewhat artificial plots. It is everyday life; even the money profit is a factor. A notebook should be kept of things done in the project, and occasional reports written. These are excellent composition lessons. The cost of everything should be noted, and a final balance of profit or loss shown. This is a combined lesson in economy, thrift, scientific management, arithmetic, and farm accounts, yet simple for all. Incidentally pupils learn to observe more closely, to recognize a good specimen as well as an imperfect one, and to know the insect and other enemies to combat. Thus the project method furnishes ideal motivation, and finally covers nearly the same ground as the subject method of the textbook plan which may, if thought necessary, be carried on with the project plan the last two years of the elementary school.

Exhibits and awards. To carry on these projects, any teacher should first find out from the county superintendent what the organization is for the county, and what are the selected projects for the year. Then the list of bulletins should be obtained from the United States Department, and from any state sources, and the needed ones ordered. Some

prominent farmers, merchants, etc., may be solicited to offer prizes, and these prizes should be announced as soon as possible. However, it is probably more in line with educational ideals to have only ribbon awards, blue for first quality, and red for a few others of superior quality. And it must be required that nothing shall be exhibited except the results produced by the pupil exhibiting. Boys, girls, and parents must then be enlisted to coöperate. In the fall, before the corn is finally gathered, the seed ears should be selected from the field for the corn-club planting. Everything should thus be anticipated as far as possible, and the project will almost run itself after it is well begun.

III. Advanced Nature and Agricultural Studies

For the upper grades more advanced topics in nature study and agriculture may be undertaken. To illustrate what may be done in these grades we give a suggested outline for bird study, and a general outline, by months, for further nature study work of an agricultural type,

Outline for general bird study. Children of all ages may be interested in birds, and bird topics may be used in any of the grades. At first the studies should deal with individual birds, but somewhere along the line some general lessons should be given. The following are suggestive topics: —

1. *Bird characteristics.* What is a bird? Is a chicken a bird? Is a bat a bird? Can all birds fly? Which birds cannot fly very far? How prevent a hen from flying over the fence? Explain. Is a bird's tail any help to the bird? Why are the feathers on a woodpecker's tail so stiff? What differences have you noticed in the bills of birds? Why the differences? What differences in their feet? (Walking, swimming, perching.) Some bird orders? (Prey: hawks, owls. Climbers: woodpeckers, parrots. Perchers: robins, sparrows. Scratchers: chickens, pigeons. Waders: snipes, cranes. Swimmers: ducks, geese.)

2. *Haunts and habits.* Where find birds you know? What birds remain about here all the year? Why do some migrate earlier than others? (Food.) Are many birds found in dense forests? Why so? Which birds like trees? Meadows? Houses? Which are "birds of the air"?

   Do all birds sing? Name some song birds? Tell something of their songs. Which is your favorite? Longfellow speaks of these songs as "Sweeter than instrument of man e'er caught."

   In what different ways do birds move about on the ground? (Study a few. The robin sometimes walks, generally hops.) Perch on limbs? Fly through the air?

3. *Bird enemies.* Do birds have enemies? Know their enemies? How show this? In what ways are some birds enemies of others? Which birds build where enemies cannot well get at their nests? How do the young behave in these nests? In other nests? Why do some birds come near houses to build nests? This has brought them what other enemies? How do old birds protect young? Why have men become enemies of birds? Girls and women? Which birds make choicest decorations? Is this ornamentation civilized or barbarous? Should we be friends or enemies of birds? Why?

4. *Nests and nesting.* When do birds build the first nests of the year? Why are these birds like pioneers? Which stand the best chance, April or July nests? Why? Suppose the early nest is robbed? Do birds mate after the spring return, or do they return with mates? Which birds sing, male or female? Which have the gay plumage? Account for this. Which do the work, build, sit, feed young?

   Do most birds build high or low? Why? What bird lays eggs on dry leaves, no nest? How behave when approached? What is a parasite? Find out about the cow bird.

   What birds rear more than one brood a season? Only one? Do birds return another year to same nest? Do birds teach their young? Do they have emotions such as grief, sorrow, joy? Should we respect these?

5. *Study of special birds.* Much has yet to be learned of the real life of birds. If a child comes to know fully and sympathetically a few varieties, it will be better than too scattered a general knowledge. Choose some convenient varieties, then search for others in their haunts and homes. Observe nests, noting (*a*) location, surroundings, material of nests. (*b*) Color,

shape, number of eggs. (*c*) Time from first egg till first hatch. From hatch till leaving nest? (*d*) Appearance and behavior of young birds. (*e*) Which bird feeds the young? What food? (*f*) Difference in appearances of male and female? (*g*) Note bird parts, behavior, flight, song, etc. Keep a notebook and write up each series of observations.

Make a bird house open on the side opposite the entrance hole, and fasten to a window of a house so that the open side is against the window pane. Birds will often build in such a nest, then you have a joyous observatory.

6. *General summary.* Distinguishing marks of birds. Location in animal kingdom. Families and their characteristics. Parts of a bird and their functions. Life story of a bird. Uses to man.

7. *The uses of birds.* (*a*) Birds destroy millions of insects and their eggs. (*b*) Trees and all vegetation are necessary to human life. Insects multiply so rapidly, if left alone, they would destroy all vegetation. Lawns, gardens, groves, grain fields, would soon be desolation without birds to check insect ravages. (*c*) Birds inspect all trees, limb by limb, bud by bud, searching for insects, eggs, and larvæ as no human eye can search. (*d*) Take all birds from woodlands, fields, and yards, and we would then realize how much beauty they add to our landscape. Their music is the sweetest in nature, and they fill the world with rare beauty and melody. (*e*) Birds are as necessary to man as are the showers of spring. They are worth $500,000,000 annually to farmers of the United States.

In 1891 and 1892 there was a starvation time in Russia due to insect ravages, the birds having been killed by excessive freezes. Without birds, human life seems impossible.

8. *Birds decreasing.* Why? How save them. (*a*) Value of forests. Folly of ruthless destruction of trees. Bird Day and Arbor Day go well together. (*b*) Millions of birds slaughtered to feed the vanity of women. Discourage this. (*c*) Sportsmen and boys shoot thousands. Teach their use and beauty. Let boys expend their shooting instincts on English sparrows. A study of our common partridges, Bob White, will convince that we should domesticate him. A covey will clean a potato patch of bugs. This bird in numbers will eliminate the boll weevil. He is a voracious eater of weed seeds. He can be tamed, and he may be made a coworker of marvelous worth.

REFERENCES FOR BIRD STUDY

An excellent book for teachers and pupils is the school edition of *The First Book of Birds*, by O. T. Miller (Houghton Mifflin Company). Another such interesting and valuable elementary book with colored pictures resembling life is *Our Birds and their Nestlings*, by M. C. Walker (American Book Company). *Bird Stories from Burroughs* (Houghton Mifflin Company) is another good book. These are small, inexpensive, very interesting books.

A fuller book (price $2) rich in facts of the economic value of birds, treating nearly two hundred common birds, thus of great aid to a teacher, is *Birds of Village and Field*, by Florence Merriam Bailey (Houghton Mifflin Company).

Farmers' Bulletin 54, U.S. Department of Agriculture, is excellent for a study of what birds eat, therefore whether beneficial or harmful.

For identification pictures, the *Audubon Bird Chart* (Prang Company) is excellent.

Outlines for insect study. This class furnishes the richest and most inviting field in the invertebrate group, as birds do in the vertebrate group. Insects are of such variety, interest, and importance that they may be partly studied in any grades as time will permit. A knowledge of them means so much for the farmer that they must be studied in agriculture. No one insect will serve as a complete introduction, but types should be selected from important orders. No detailed treatment can here be given. The following are important: —

(1) Straight-winged (*Orthoptera*): grasshopper, locust, cricket.
(2) Sheath-winged (*Coleoptera*): beetle, June beetle, potato beetle (called bugs).
(3) Scaly-winged (*Lepidoptera*): butterfly, moth.
(4) Half-winged (*Hemiptera*): bug, cicada, plant lice, squash bug.
(5) Membrane-winged (*Hymenoptera*): bee, wasp, ant.
(6) Two-winged (*Diptera*): fly, mosquito.
(7) Nerve-winged (*Neuroptera*): dragonfly.

Characteristics: Insect means *cut in*. The body is divided how? How many legs? Wings? Peculiar life cycle? (Metamorphosis.)

It is important to know what the eggs of any common beetle, butterfly, or moth will hatch. Many grown people, even farmers, do not know that maggots are young flies and wiggletails are young mosquitoes. Flies want decaying animal matter and mosquitoes want standing water in which to breed. Where have you seen maggots and wiggletails? How prevent such breeding?

The hygiene of sanitation is a related topic for full treatment. A partly glass observation hive-box with bees will supply an exceedingly interesting study.

REFERENCES FOR INSECT STUDY

A most valuable book for the teacher is *Farm Friends and Foes*, by C. M. Weed (D. C. Heath & Co.). It studies insects, weeds, birds, mice, rats, rabbits, and some bacteria and fungi. A small elementary book.

A simpler book for children is *Insect Folk*, by M. Morley (Ginn & Co.). Also *The Bee People*, and *Wasps and their Ways*, both by M. Morley.

Other important studies. Similar studies of weeds, soils, plants in general, and the corn family of plants should be made along with the earlier years of club projects in agriculture. Some of these topics may be well treated in the school text in agriculture, but nearly all topics of the text will need supplementing. As in history and in geography, the wealth of material so near at hand should be utilized to vitalize the study of agriculture.

Nearly all the elementary texts are prepared for one year's study. In some of the States, Manuals have been prepared, but only a few of these are for a two-years course.

The bulletin for Wisconsin's elementary schools (1915), by State Superintendent C. P. Cary, covers topics for two years, month by month, and is fairly well planned for alternation. Such a plan will make it possible to have the study by subjects, as in the textbook, run through two years, though the teacher combines the two in one class each year

and makes the topics fit in with, and help on, the home club work. For suggestion in selection of topics, the Wisconsin outline is here reproduced. The bulletin gives full and clear information on the handling of each topic, and the warning is well given that not all should be undertaken by every school.

Topics for study, by months. Following is the list of seasonal topics which was prepared for the two upper elementary grades of the Wisconsin schools, by the State Department of Public Instruction, the State College of Agriculture, and the United States Department of Agriculture. It is planned for either part to be taken first. Adapt for any other State.

PART I, FIRST YEAR

September

1. Seed-corn selection.
2. Curing seed-corn.
3. Wisconsin weeds and weed seeds. (Optional topics on birds and insects.)
4. Home garden in September.
5. Ten-ear samples of corn.
6. Selecting the project flock of poultry.
7. Review and management lesson.

October

1. The orchard survey.
2. Soils: general acquaintance.
3. Breeds of dairy cattle.
4. The dairy type.
5. The fall campaign against weeds.
6. The production of clean milk.
7. Review and management.
8. Supplementary topics.

November

1. The poultry house.
2. Rations for dairy cows.

3. Pruning the home orchard.
4. Dairy practice.
5. Destroying dormant insects.
6. Knowing horses.
7. Recognition of soils.
8. Review and management.

December

1. The care of dairy cattle.
2. Winter care and feeding of the laying hen.
3. Winter care of the farm-horse.
4. Dairy cattle: finding the boarder.
5. Corn judging.
6. Feeding horses.

January

1. The silo: principles; survey.
2. Testing milk and cream.
3. Value of pure-bred cows.
4. Clean farm-seeds.
5. Sanitation of home and dairy.
6. Corn as food.
7. Review and management.

February

1. Dairy records and computations.
2. The home garden: looking forward.
3. The care of the foal.
4. Natural incubation of hens' eggs.
5. Silo construction.
6. Summer forage and pasturage for dairy cattle.
7. Home orchard: early spring practice.

March

1. Home garden plans.
2. Selecting and marketing eggs.
3. Testing seed-corn.
4. The home garden under glass.
5. The early care of chicks.
6. Tree-planting.
7. Spring management and review.

April

1. Farm practice to utilize soil water.
2. Preparing the garden.
3. The care of the calf.
4. Insuring the crop against weeds.
5. The home fruit garden.
6. Spring poultry management.
7. Preparing to plant corn.
8. Helpful birds on the farm.

May

1. Early cultivation of the garden.
2. Summer orchard practice.
3. Growing silage.
4. Summer management of poultry.
5. Summer practice in field and garden.
6. Review and summer management.

Part II, Second Year

September

1. Fruits and seeds.
2. Filling the silo.
3. Selecting "seed" potatoes.
4. Harvesting, marketing, and storing potatoes.
5. Soils and cover crops.
6. The home garden and the exhibit.
7. Beef cattle: types and breeds.
8. The legumes in Wisconsin.

October

1. Preparing swine for market.
2. Grasses for mowing and pasture.
3. Fungus as a pest.
4. The typical beef animal.
5. Fall management of the home garden.
6. Sheep for Wisconsin pupils.
7. Review and management.

November

1. Poultry for market or the home.
2. Identification of grains.

3. Care and feeding of beef cattle.
4. Clover on Wisconsin farms.
5. Poultry: breeds and purposes.
6. Grading and scoring grains.
7. Review.

December

1. Poultry diseases and pests.
2. Swine survey.
3. Crop rotation outlook.
4. Poultry records and accounts.
5. Beef cattle: related farm practice.
6. Winter feeding and care of swine.
7. Review.

January

1. Natural fertility of the soil.
2. Winter management of sheep.
3. Pure seed for forage crops.
4. Selecting the breeding flock of poultry.
5. Beef cattle: plans for spring practice.
6. Insects and diseases.
7. Review and management.
   Supplementary topic — The Potato Tuber.

February

1. Germination studies: seed-testing.
2. The perennial garden.
3. The care and feeding of young pigs.
4. Natural and commercial fertilizer.
5. Improvement of home and school grounds.
6. Pedigreed grain and other seeds.
7. Review and management.

March

1. Care of young lambs.
2. Cold-frames and hotbeds.
3. Early care of incubator chicks.
4. Small fruits for Wisconsin farms.
5. Sheep and swine in the spring.
6. Practice in conserving fertility.
7. Potatoes: preparation and planting.

April

1. Preparing the home vegetable garden.
2. The mowing and pastures in spring.
3. Planting and transplanting in the home garden.
4. The lawn and the flower garden.
5. Why grow alfalfa.
6. Review.

May

1. Poultry management in summer.
2. Control of insect and fungous pests.
3. How to grow alfalfa.
4. Summer management of the home garden.
5. Summer management of animals.
6. Summer management of the potato field.
7. Review exercises for May.
   List of optional topics.

Supplementary topics. Local conditions may make it desirable to take up one or more of the following, or similar topics: —

1. Bees and crops.
2. Hemp-raising.
3. Turkeys or geese.
4. Forestry: evils of deforestation; the farm woodlot.
5. Road-building.
6. Drainage on the farm.
7. Farm accounts.
8. Ice for the dairy farm.
9. Machine sheds and tool-houses.
10. Cranberry management.
11. Oranges.
12. Peanuts.
13. Tobacco.
14. Sugar-cane.
15. Beet-sugar.
16. Cotton.
17. Nuts.

The general scheme of this outline is to include each year a study of some farm animals and one main field crop, with related practice, and to carry through both years poultry and garden projects. The club projects of the two earlier years may eliminate some topics from the upper years except as reviews.

Good farm lessons. It should be thoroughly impressed that scientific farming means farming for greater profits and for greater pleasures. In all cases stress the differences in favor of thoroughbreds over scrubs in both animals and plants. Young people should know the varieties of chickens and the ones good for eggs, for table meat, and for combination of these. At some time each child should have charge for a season of a pen of poultry, and keep the records, plan the food, pick out the worthless, raise the chicks, etc. Different varieties in different families will make possible a great chicken show each year, with blue and red ribbon awards for finest pullet, rooster, pen, hen and chicks, etc. And a two-weeks laying contest is positively exciting.

In a similar way the varieties of cattle should be known — good for milk, for butter-fat, for beef, and for combination purposes. We know a case where a calf from scrub cattle was offered for sale at $6, and a calf of the same age from pedigreed stock was offered for $125. The $125 calf was sold for that amount some time before the other could find a purchaser. Recall here the cases of one hundred and eighty to two hundred bushels of corn as over against the usual yield of from twelve to fifteen. The more intensive treatment yields by far the greatest returns. These are inspiring lessons for children, and they may transform the life of the country. No teacher should hesitate to enter this field of school work, even though the beginnings must be simple. The work will grow, and its teachers will live to see the fine results of their labors.

GENERAL HELPS FOR TEACHERS

For nature study a few fundamental books will lay the foundations. *First Studies of Plant Life*, by G. F. Atkinson (Ginn & Co.); *Lessons in Zoölogy*, by J. G. Needham (American Book Company); and *Nature Study*, by F. L. Holtz (Charles Scribner's Sons) are all good. The first two are written somewhat on a nature-study plan, and the third has a complete list of other books from which to select a library.

For beginnings in agriculture there are many elementary texts. Supplementing any one of these, *School and Home Gardens*, by W. H. D. Meier; *Farm Friends and Farm Foes*, by C. M. Weed; and a collection of free bulletins from various sources will serve as a beginning. *A Primer of Forestry*, issued by the United States Department of Agriculture (not free), should be added.

Write to the United States Department of Agriculture, and to the state agricultural college and the state normal schools of the home State for a list of bulletins for teachers. Also write to the state superintendent of schools of the home State for such bulletins as may have been issued.

Every State has its summer schools and its college of agriculture, where short courses are given for teachers. The state summer schools for teachers usually give excellent courses in nature study, agriculture, and all correlated subjects. The college of agriculture may also offer short courses for children in club projects. If representatives from each school can go to the short courses, then come back with full reports to other children, interested activity will be greatly stimulated.

QUESTIONS FOR DISCUSSION

1. What are the many valuable ways in which observation and study of nature may contribute to the education of the child?
2. Reconsider and weigh again your notion of education. Can agriculture and nature study be left out and yet your notion of education be realized?
3. Account for the tardiness of rural teachers in using this material.
4. Work out type studies of the mosquito, the fly, and the quail as sample lesson plans.
5. Why have school gardens not been more successful?
6. What advantages to be secured through home and club work? Should this be counted as school work? How may a school garden aid the home work?
7. What is meant by school credits for home work?
8. After a careful consideration of what home work is available in your school community, make out a list of things for credit and the credits for each under the following: *a*. Household arts. *b*. Agriculture.

c. Making useful and ornamental things. *d.* Club Contests. *e.* Miscellaneous.

9. Compare the two outlines given for agriculture, First year and Second Year, and decide which is the better arranged and more complete. Can either be taught first?
10. If you have an adopted textbook for agriculture, go through it along with the given outlines and check the topics in the book for use with the topics in the outlines. Probably the book will lend itself to alternation.
11. Make a study with the children of material used in the community and their sources for the following: *a.* Clothing. *b.* Food. *c.* Building. *d.* Farm machinery. *e.* Fuel. Then study the transportation of the materials. Is there waste which might be prevented?
12. Make definite plans for contributions of your school to the accomplishment of the following: *a.* Agriculture remunerative and productive. *b.* Country beautiful. *c.* Country life comfortable. *d.* Community coöperative. *e.* Rural people educated and cultured.
13. "At least in the two upper grades, one-fourth of the school time should be given to agriculture and home economics." Discuss.
14. Does your county have any extension representatives, club organizers or demonstrators of the state agricultural college? If so, how are they helping you and are you working with them?

BOOKS FOR TEACHERS

Alderman R. *School Credits for Home Work.* (Houghton Mifflin Company.)

Davis, C. W. *Rural School Agriculture.* (Orange-Judd Company.)

Heald-Cary. *Course of Study in Elementary Agriculture.* (Department of Education, Wisconsin.)

Previously referred to in text.

Hodge, C. F. *Nature Study and Life.* (Ginn & Co.)

Miller, E. A. *Elementary Vocational Agriculture.* (Maryland Agricultural College.)

A most excellent manual of a one year's course.

Schmucker, S. C. *The Study of Nature.* (J. B. Lippincott Company.)

Soule-Turpin. *Elementary Agriculture.* (B. F. Johnson Company.)

Consult the text of this chapter and references under Special Rural Arithmetics for other helpful books.

CHAPTER XVII

PHYSIOLOGY, HYGIENE, SANITATION

The rural school and health. Recalling again the truism from Herbert Spencer, "Our first duty to the child is to make it a strong, healthy animal," we are reminded to add, "What profiteth a person to gain the whole world of learning and lose his own health?" The fundamental value in life is health; it is the richest wealth. In considering educational values, the worth of arithmetic, of history, of literature, of every school subject, we must assign the highest value to educational hygiene. Ill-health is a great enemy of happiness, and much of ill-health is preventable. We need less of the prevalent curative medicine of the doctor and more of preventive medicine. It seems that public-health agencies cannot be so fully utilized in the country as in the city, and we must depend more upon the immediate influence of the school in preparing for happy and efficient life. The rural school must give greater place to health education.

In Chapter II, under the topic, "Broadening View of the Rural School," some demands on the modern school for the betterment of bodily life were pointed out.

In Chapter IV the treatment presented as educative factors the school-grounds, the schoolhouse, the blackboards, the desks, the lighting and heating, the water-supply, the playground and play, and the daily schedule. These all have a direct bearing on health, and nothing here should be slighted.

In Chapter V, "Periods of Growth and Development," much was said of the physical characteristics and needs of

different stages of growth. Especially should backwardness in growth be noted and any abnormalities discovered. Backwardness in mental development will emphasize the variation of physiological age from chronological age. A physical record kept of each child, comparisons made with the normal expressed in the table, "Measurements of American Children," and causes of defective growth located and removed, constitute one of the most valuable fields of work for the rural teacher. A county-school health officer is needed to assist in this great work.

In Chapter XVI, "Nature Study and Agriculture," some correlations were suggested for the teaching of physiology, hygiene, and sanitation, and it was intended that such instruction should be continuous through the grades. In connection with "Home Economics" and "School Lunches," the proper foods and balanced meals are emphasized. This work affords a splendid opportunity for many health lessons.

Though much has thus been given throughout this treatise bearing on health, probably some things further need to be stressed, but the brevity of this chapter must not be looked upon as an index to the weight we give to the subject.

Physical conditions. To begin with, too much attention cannot be given by teachers to the hygiene of the lighting and ventilation of schoolrooms. The amount and the direction of light should be regulated constantly and with great care for every child. Not too much blackboard copying should be given, and never with a shiny glare from the board. All reading and writing should be with proper light on the paper.

The ventilation should keep plenty of fresh air, with sufficient moisture in it, in the room. Stoves and furnaces kiln-dry the air, and the mucous membranes using such air are likely to become dry, hardened, and unhealthy. Aside from the serious danger of developing catarrh and other

throat and nose diseases, the breathing of such air makes children irritable, nervous, restless, and unstudious. These conditions draw upon the time of the teacher in discipline and in instructing children who have imperfectly assimilated the study lessons. This is a clear waste of time which may better be given to ventilating, even if fewer classes can be heard. Sometimes, when disorder seems to set in, the best thing to do will be to lay aside work for a few minutes, ventilate the room, and have the pupils stand for exercises of full, deep breathing. The hygiene of proper breathing and the care of respiratory organs should be fully impressed upon the pupils. Red blood is one of the things greatly to be desired at all ages and in all pursuits of life. Let youth learn how to get it, keep it, value it.

What a rural school should teach. The most important thing to be taught is practical hygiene. Once we taught the structure of the body — its framework, movement, and activities, with the names of its different parts. While the teaching of these subjects may be made means for the imparting of health instructions, they are after all of but small use to elementary-school pupils. These anatomical and physiological features are only incidental to the much more important instruction in how to care for and preserve the body and bodily health. Any text used should be selected with especial reference to its bearings on hygiene and sanitation. If any book is used below the two upper grades, it should be one which treats directly the care and value of health. If time permits, it is better to make the instruction oral in the lower grades, then select for use with the two upper grades some text chosen for its interesting treatment as well as for its scientific instruction.

All studies recently made of rural health conditions have shown, quite conclusively, that conditions among rural children are not nearly so good as among city children, and

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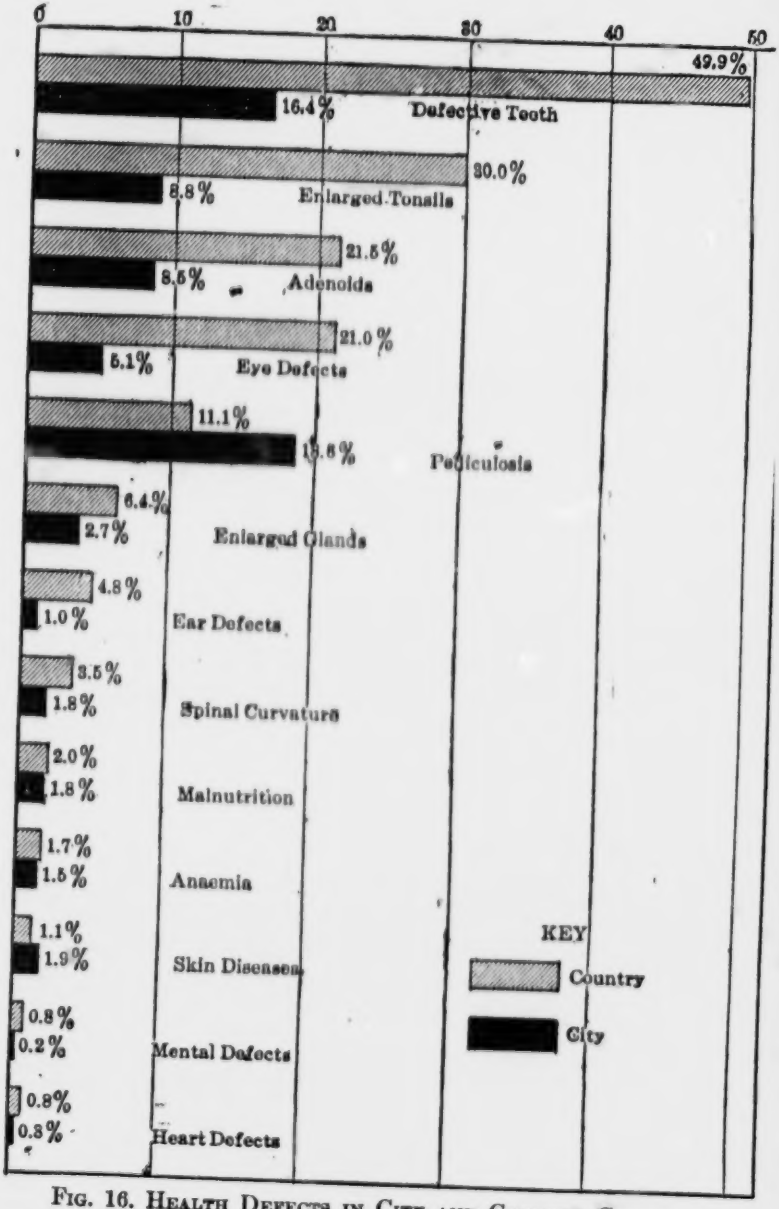

FIG. 16. HEALTH DEFECTS IN CITY AND COUNTRY CHILDREN COMPARED

Compiled from a study of the health examinations of children in twenty-five American cities and of rural-school children in five American States. Only in pediculosis (head lice) and in skin diseases do the city children show greater percentage of defects.

the inevitable conclusion to be drawn from these studies is that the rural school should give more attention to instruction in the care of the body. The care of the eyes, ears, nose, and throat, offers a field for useful instruction. How and what to eat and drink (digestion), how to care for cuts and bruises, the intelligent care of the nervous system, proper exercise, how to breath properly, proper clothing to wear, proper carriage and posture, the care of the teeth, bathing and cleanliness, and sleep, are all important topics for talks and careful instruction. How and what to eat and drink offers excellent opportunities for instruction in connection with the work in domestic science. What constitutes sanitary conditions at school and at home also offers a large field for discussion, pupil investigation, and useful instruction.

The hygiene of posture is one a teacher should study carefully and then study the pupils accordingly. Flat chests, irregular shoulders, curved spines, bad breathing and circulation, all may be produced by careless postures. Postures in writing, studying, reciting, and standing should be constantly watched. This should not lead to nagging, but cheery reminders are priceless friends. Models should be explained, and defects pointed out in individuals. Pupils must be led to admire those of erect, graceful posture and gait, and this admiration will strengthen motive to become likewise.

The hygiene of the eyes and teeth are improperly understood and valued by rural children. Reading by a poor light is common, and the use of eyeglasses is not. The tooth brush is too rare, and many children never see a dentist except to have a tooth pulled. Yet indigestion, nervousness, poor blood, poison in the system (auto-intoxication), and even rheumatism may be the result of bad teeth. Cavities lodge decayed food to breed bacteria, and absorption of pus from an abscess will poison the system.

The importance of cleanliness should be emphasized. To make this instruction as practical as possible some arrangements should be made for bathing of hands and face after play periods. Liquid soap is not expensive, neither is a patent holder from which to get it. The towel problem is greater, but rolls of paper towels are the best for use, and these should be willingly furnished as are other school supplies. A call to clean up should be given a little time in advance of the call to books, and always before eating the school lunch.

Child hygiene important. The hygiene of the school child should be a first and most conscientiously thorough study made by every teacher. Abnormalities of bodily or mental development, defects of the special organs of sense, disorders of these and of the nervous and digestive systems, and symptoms of the common infectious or contagious diseases are matters for constant observation on the part of the teacher, who must therefore become intelligent concerning all such. To become such the teacher should read carefully some good book on Child Hygiene,[1] and to become sensitive to conditions actually existing in the school the teacher should quietly make a health survey of her school.

The health survey. This need not be hurriedly made, but may run through a month or two. Items first recorded may be the age, height standing, height sitting, weight, and grade of the children of the school. Some questions may be answered by the children, and a list of questions may be answered with the help of parents, the answers being made a part of the teacher's record. Some suggestive questions are the following: —

[1] *The Hygiene of the School Child*, by Professor L. M. Terman (Houghton Mifflin Company, Boston), is probably the best book for the teacher to read. It covers the field thoroughly, and is written in a simple and readable style.

Do you sometimes have toothache? When have you been to a dentist? Do you brush your teeth regularly? Have you ever had teeth filled?

How do your eyes trouble you? Do you have trouble reading from the blackboard? Does print blur or show double? Have you ever had your eyes tested? Do you have headache?

The teacher should note the appearance of the eyes, clear or irritated, and use Snellen's Test, entering the results in each record.

Do you sometimes have earache? Do your ears ever run? Do you hear well in school? Is it hard to breathe through your nose? Do you breathe with mouth open? Snore at night? Have sore throat often? Catch cold often?

The watch-tick and tapping tests of hearing can easily be made and these results recorded.

Do you have sore throat or colds often (two or three times a month)? Have you ever had adenoids or tonsils removed?

Do you tire easily? What work do you do outside of school hours? When do you eat breakfast? What do you generally eat for breakfast? How much coffee or tea do you drink? Have you ever had any serious sickness? When did you have sickness? (Especially note here the common diseases of children, measles, etc.)

The chart on the opposite page shows the results of such a questionnaire applied to approximately 20,000 school children in one of our better American cities. This may form an interesting basis for comparison with a rural school, or county.

The teacher's records. The teacher should have a special notebook for summaries of these records, a page or two given to each child, and observations of the teacher added to the information from the child. The teacher should observe general appearance, nervous tendencies, and sufficient or insufficient clothing. Mental conditions must also be observed. Compare the chronological age with apparent physiological age, shown by advancement in studies as well as in size. Is the child backward? Is he mentally alert, bright, attentive, answering questions promptly? Does he play spontaneously, and with children of his own

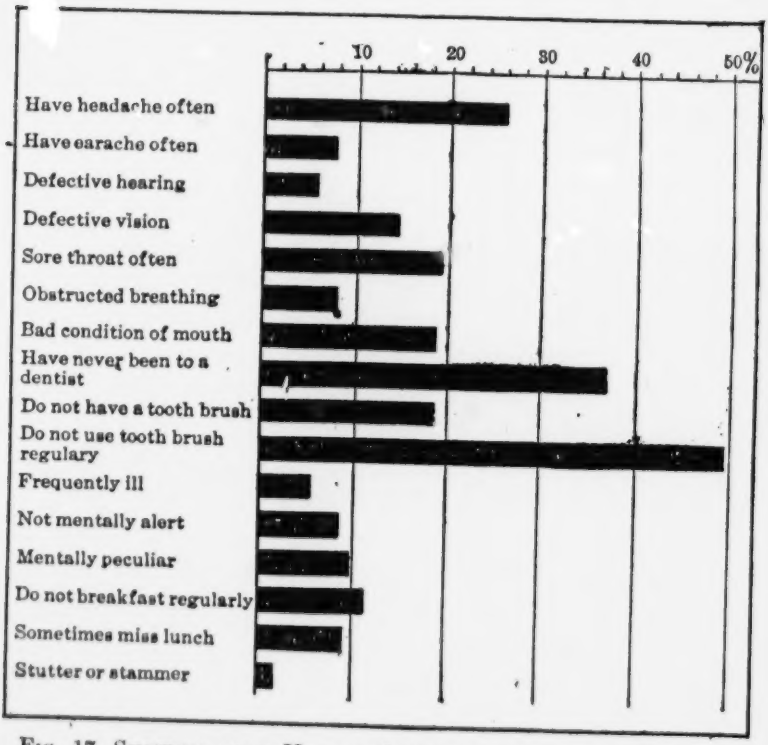

FIG. 17. SHOWING SOME HEALTH CONDITIONS AMONG THE SCHOOL-CHILDREN OF SALT LAKE CITY

(From the *Report of the School Survey*, 1915.)

age? Is he timid? Ill at ease? Sulky? Cruel to others? Selfish?

Something of all this, in an abbreviated summary of items, should be a matter of report from one teacher to the next, as much so as attendance and scholarship grading. This is more worth while. Much of it may be for the benefit of the teacher making the survey. It will make her better acquainted with her pupils and far more helpful in directing their lives. And when any definite trouble seems to be located, — adenoids, eye-strain, deafness, bad teeth, or the like, — the school

health officer or the parent should be consulted. Very cautious must be the advice about sufficient clothing and proper food, yet sometimes direct advice needs to be given, at other times general instruction will be sufficient.

Pupil sanitary surveys. Older pupils in home economics and agriculture may make sanitary surveys of the neighborhood as to home surroundings, drainage, slops, dairy hygiene, proximity of stable or pig pen, flies, mosquitos, etc. Some reports of these may be read as a feature in a special school program with parents invited, or better be made a topic of discussion in mothers' meetings. In any event, the making of the survey and its significance pointed out will do good merely as a school exercise.

This work may be enlarged by readings and talks as to sanitary work in our cities, the cleaning-up of Cuba and Porto Rico, the sanitary conditions in the Canal Zone, preventable mortality from common diseases, "Safety First," etc. Much help on these topics can be obtained from the numerous Health Readers and similar books now on the market.

Mental hygiene. This phase of hygiene has not as yet come to its own. Habits of attention, alertness, interest in environment, association of ideas, and other intellectual habits or traits do receive some attention. But the emotional life is fundamental and all important in its relations to health and happiness. Emotional states have a reflex influence on bodily health. Many secretions are influenced by the mental states. The injurious mental states are those of anger, fear, jealousy, moroseness, constant distrust of others, grief, etc. These stimulate poisonous secretions injurious to the bodily health, as well as serve as active agents of unhappiness. On the other hand, joy, hope, trust, sympathy, good will, good cheer, looking on the bright side, and counting blessings rather than evil fortunes, are mental states conducive to

bodily health as well as to happiness and moral character. It is the duty of the school to assist in building these proper mental habits and in teaching their values. Good play, interesting school work, and manual activities all help in the right direction.

Building permanent interests in nature, literature, art, recreation, vocation, and service for others is a great factor in mental hygiene. School credits for home duties as well as for home work have been used to good effect.

QUESTIONS FOR DISCUSSION

1. A paradox from Rousseau is, "We gain time by losing it." Wherein is this applicable to time given to schoolroom ventilation and to health surveys of the children?
2. Make a list (*a*) of the most apparent symptoms of common transmissible diseases of children; (*b*) of common nervous disorders; (*c*) of causes of backwardness in children.
3. Account for the bad health showing of rural children. Indicate remedies.
4. In what ways may a teacher tactfully influence for better the home hygiene of children?
5. What advantage in mental hygiene may exercise through play have over calisthenics? What can best be accomplished through formal exercise?
6. What effect in mental hygiene if the teacher is a person who is sympathetic, optimistic, joyous, cheery, and tactful? What effect if the opposite? Can habitual attitudes of mind be changed for the better?

BOOKS FOR TEACHERS

Allen, W. H. *Civics and Health.* (Ginn & Co.)
Dresslar, F. B. *School Hygiene.* (The Macmillan Company.)
Gulick, Luther. *Gulick Hygiene Series.* (Ginn & Co.)
Hutchinson, Woods. *Health Series.* (Houghton Mifflin Company.)
Hutchinson, Woods. *Preventable Diseases.* (Houghton Mifflin Company.)
Rapeer, L. W. *Educational Hygiene.* (Charles Scribner's Sons.)
Ritchie-Caldwell. *Physiology-Hygiene-Sanitation Primers.* (World Book Company.)
Tanner, Amy E. *The Child.* (Rand, McNally & Co.)
Terman, L. M. *The Hygiene of the School Child.* (Houghton Mifflin Company.)

CHAPTER XVIII

ARTS AND CRAFTS

THREE types of work are possible in rural schools, even with very meager equipment. Home economics work in some form can be carried on through coöperation with the homes, even though very little of the practical work is done in the schools. The sewing can be done in the ordinary seats. For the manual arts work, a bench can be erected in some part of the schoolroom, or in an outer shed. We shall describe briefly some types of work which may be done in rural schools, in (1) "Home Economics," including needlework, and (2) "Manual Arts."

I. HOME ECONOMICS

Home Economics is considered mainly a subject for girls, yet boys often enter into such projects as bread- or cake-making, canning, and house-planning. Boys should not be excluded if circumstances are favorable. However, in rural schools, where time and equipment are matters of such close economy, boys may be occupied with handicrafts with saw, hammer, and forge, while the girls go in for cooking, sewing, artistic basketry, and pottery. The greatest problems of home plans and sanitation are for both sexes.

Club and home work. Where there is no extra schoolroom or equipment for domestic science, the teacher should organize at least the two upper grades of girls into a Home Economics Club. One year may be given to cooking, and the other year to sewing and basketry, or these may be carried on together. The latter is the better plan. If the tomato and

canning club has been in operation, this has made a beginning. The canning of other fruits, berries, and garden vegetables, and also the making of jellies are related activities for this club. Tomatoes are not often as profitable for girls as corn or potatoes are for boys, but the canned article raises the profit. Why not a small cannery for making more money than through peddling the raw articles, especially by way of realizing on the overplus of a bountiful crop? The teacher may discuss general topics and special recipes or designs, and the pupils are to complete the lessons at home, reporting the results. Even where there is a good school equipment, home work is necessary. Often zest will be added to the work if it is under the auspices of a club organized at school and given some liberties in choosing and directing its doings.

1. Cookery

Some general topics for study and club discussion:

1. The different kinds of foods; their sources and food values. The needs of the human body for health. Well-balanced food rations. (If the latter is so important for domestic animals, why not more so for man?)

2. Reasons for cooking. Different methods of cooking, and the methods for each article of food. Leavening and seasoning.

3. Fuels and implements in cooking. The fireless cooker. A model kitchen; its location, plan, utensils, places for utensils.

4. Planning a meal. Some special menus to illustrate well-balanced menus, variety, and attractiveness.

5. Serving a meal. Rules for setting the table and serving the meal. Value of good serving. Faults of serving in rural homes. Furnishings for the dining-room. Value of tasty, attractive surroundings.

Special recipes and menus. If the teacher does not feel competent to demonstrate and to direct all phases of cooking, she can, at least, with some book such as *Foods and their Uses*, by Carpenter, discuss foods in a helpful way; then, with recipe books, she can start the children on many things to be carried out at home, the whole to be treated as school lessons. This means a report on the home work in the making of breads and all such, with competition for the best loaf of white bread from the recipe selected, the best brown bread, nut bread, soda biscuits, beaten biscuits, etc. Corn breads and batter cakes cannot so well be exhibited, but they should be included in the menus and tried out at home. Causes of failures should be sought out, and "try again" encouraged.

In the fall, preserving fruits and making jellies, fruit butters, etc., are timely activities. If any in the community has a special reputation for excelling in any one thing, get the recipe for the children to try out. Some neighbor will excel in one thing, another in something else. Enlist the aid of the mothers and older sisters in this way.

Recipes for different ways of cooking and serving apples; similarly other fruits and berries should be tried out.

Treat various meats, eggs, and vegetables similarly. Menus for desserts are important for full consideration.

The planning of menus should be well discussed. Rural people are great on plenty, but too often the profusion has no consideration of balance or dainty service. Both balance and service are points the teacher may talk with authority, even though she cannot boil a ham or make a cherry pie.

Have pupils make suggestive menus for each meal of a week in summer, and another for a week in winter. Have these brought up and discussed. What should be the menus for children in school?

Dishwashing. Stress the importance of this being thor-

oughly and carefully done, and everything put away in regular order. Stress also the especial care needed with milk vessels, the sanitary disposal of slops, and cleanliness, sanitation, and orderliness at all times.

School lunches. As a matter of hygiene and efficiency, school children should have something hot with their noonday meals, especially in cold weather. Cold lunches day after day are not beneficial to the health of growing children. Many city schools have established regular lunch-counters and dining-rooms where, for a few cents, each child may secure the whole meal at school.

The movement for hot lunches for rural children does not go so far. Children bring their lunches as before, except that all are to assist in some way, that something hot may be served. Hot soup, hot chocolate, hot potatoes or apples are illustrations. The preparation of the hot article for lunch will give the older children an opportunity to do some simple cooking and serving. This hot dish will increase the nutritive value of the lunch, furnish opportunity and motive for the lesson in preparation of foods, and serve to make the meal for all more companionable and homelike.

A small equipment would be necessary, yet it need not be expensive. A two-burner oil stove and an oven therefor; one eight-quart granite kettle, one pan or skillet, one three- or four-pint mixing-bowl, one small bowl, one twelve-quart dishpan, mixing-spoon, tablespoon, teaspoon, graduated cup, kitchen knife and fork, paring-knife, apple-parer, and a Dover egg-beater will be enough to do much with. This list may be modified to suit the needs. The whole will cost only about ten dollars. The older boys, with the help of the girls, can make, out of dry-goods boxes, the cupboard of shelves to hold the equipment and supplies.

Supplies. Each child should supply his individual outfit, — a cup, saucer, plate, fork, and spoon. Paper napkins will

add to the value of the service. Each child should have a napkin to spread on his desk and another for private use.

Nearly all the supplies can be brought from home. Probably a few families should take turns in supplying milk, though it may be practicable and sanitary to have each child bring a regulation bottle of milk such as the typical dairies now use. There may be home conditions such that some children can bring only certain vegetables, eggs, or special supplies. A little management on the part of the teacher will regulate this. Plans must be made and the dishes selected a few days ahead. If apples or potatoes are needed, each child can bring one. Also each one can bring sugar, salt, flour, etc., as requested. All of this will not be burdensome on any, and will soon come to be a genuine pleasure.

Conduct of the work. A committee of housekeepers should be appointed each week, as small a committee as practicable. This committee is to prepare, serve, and put away the dishes. Other helpers may be named to assist in serving or in washing dishes. The committee should begin the preparation in due time according to the dish to be served. The committee may help choose the dishes, the teacher keeping an eye to proper sequence.

The most convenient and suitable dishes are cocoa and nourishing soups, such as cream of tomato, cream of peas, rice gruel, vegetable (gumbo), and meat broths. Other dishes are baked potatoes, baked apples, apple tapioca pudding, steamed custard, baked custard, milk and bread, creamed eggs, scrambled eggs, macaroni with tomato sauce. Most of these may be quickly prepared, and experience will extend the list.

It will be necessary to have the coöperation of the parents. If it is new to them, a meeting of mothers should be called in the fall, before the cold weather, the scheme explained to them, and their coöperation secured to get the equipment and to furnish daily supplies.

If nothing more can be done, much will be accomplished if in the fall the canning club takes care of fruits and jellies for home cupboards; in the winter, practice making breads, pies, cakes, and school lunches; and in the spring, preserve, can, and jelly the strawberries, cherries, etc. Results exhibited at the school fair will stir enthusiasm for greater things. The study of the process of digestion and the hygiene of eating and drinking should be correlated.

2. Needlecraft

Sewing and care of clothes. The Home Economics Club should take up sewing activities also. This is easy to do, because it requires no elaborate equipment and can also be carried on at home. Patterns and materials may be discussed at school, the work to be done mostly at home, though odd hours at school may be used for handwork. One of the first things needed will be a workbag. Have a discussion of the pattern and the stitches used in making, then have each girl make a gingham one by hand. In a similar way make a sewing apron, with suitable pockets.

Make a model, showing how to mend a tear or adjust a patch. Have them bring torn garments and stockings in need of darning from home and show them how to mend them. Discuss the different kinds of cloths and the sources of materials. As Christmas approaches, interest them in making Christmas presents, dainty handkerchiefs, aprons, scarfs, workbags, traveling-cases, etc. Simple embroidery will come in here.

Talk with them about the care of garments, pressing, ironing, folding, hanging, etc.; also the textiles, weaves, qualities of cloth, etc., to help them select intelligently when shopping.

Some directions for using the sewing machine should be

given, then one by one patterns considered for the making of garments, each girl to make one according to the pattern.

Neatness and taste. Soon the idea of neatness, style, delicacy in combination of colors, and all with simplicity and small expense, will make interesting topics. Especially may this be the case with the dainty materials for summer and fall dresses, nightdresses, and underwear.

Taste in the trimming of hats is a valuable topic. The proper combinations of color in hats, ribbons, and clothes is something many women do not understand, hence they dress unbecomingly, often at great expense, when simplicity with taste would have added much to the desired effects. A teacher who cannot give regular lessons in all phases of sewing can often give valuable lessons in good taste, simple patterns, economical materials, yet very stylish effects. Loud and flashy patterns and colors generally bespeak a lack of true gentility. The opposite is often the more becoming and the more genteel.

II. The Manual Arts

Early grade work. As previously indicated, these should correlate with other work of the school and home. At first there is the cutting, coloring, cardboard construction, drawing, and modeling of the primary grades. Early in the grades the children can learn the handling of raffia to make simple mats and baskets. Later the use of raffia, rattan, pine needles, native grasses, etc., should be for making baskets, trays, boxes, and many articles of artistic designs as well as of useful qualities. Some beautiful effects may be had with native materials.

Woodwork. In the woodwork, so far as possible, things useful at home or school should be made. Much of this will be directly correlated with other school work.

With bird study there should be the making and putting up of bird houses. Rustic bird houses are the best, each one built with an eye to the habits of certain birds. There is an art in building to attract the birds.

With fly study should come the making of flytraps. The simple homemade ones are inexpensive and generally best. These should be around the house and the chicken house, generally outside to catch the flies before they enter the house.

Simple work may begin with plain boxes for corn testing, grain sprouting, starting tomato plants, flowers, etc. In this there should be attention given to the different kinds of joints and the use of proper nails and screws.

Care of tools. Then some talks should be given on tools, their use and care. The saw, hammer, plane, chisel, square, T-square, compass, brace with bits, and measuring rule are the essentials. Each boy should be provided at home with a small set of tools. If there is a good carpenter convenient, get him to come to the school to talk to the boys about the care of tools, showing them how to set and sharpen the saw, sharpen edged tools, and the proper use of each tool.

Working drawings. It is valuable early in this work for the boys to learn to interpret and use working models drawn to scale. Some working drawings of simple things to make should be given them, to construct the article in accordance with the drawing. Each boy should then be given practice in making a working drawing for approval before he makes the article. Drawings for a ladder, rabbit trap, dog house, or chicken coop will illustrate the principle, and teach the boys how to read a working drawing. Composition work may be correlated by having the boys write up a set of working specifications to accompany the drawings.

Projects. Some projects suggested for construction are the following: bracket shelf; milking-stool; chicken coop;

sawhorse; weather-vane; tool chest; sled; ladder; medicine cabinet; hammer-handle; axe-handle; hoe-handle; rabbit-trap; rat-trap; chicken-brooder; insect-cage; bee house; gate; summer house with vine and flower trellises; chicken house; school play-shed; stepladder; workbench.

Some time should be given to talks on finishing, scraping, sandpapering, staining, and painting.

Good work can also be given in cement work, and work with leather. How to mix cement, and its uses about the farm form one good topic; how to mend shoes and harness another. Very simple equipment only is needed for this work, and it is not only very interesting and educative but very useful knowledge as well.

How to handle the work if there is no special room for it. If a special room with equipment can be had at school, the projects should be set for regular hours in each week for each boy of the two upper elementary grades, just as for any other lessons, and good results required. Without this, there is the Handicrafts Club for home project work. For all this home project work, full report should be made to the teacher, and credit given as for regular school work. Pupils may count time used in this work, and when the group has obtained sufficient credits for this out-of-time work, a half holiday may be enjoyed. Exhibits should be made at the school fair.

This work must be looked upon as essentially educative. It is not alone for the practical things made, and the practical value of all such work to one who is to live his or her life on the farm, but it is also for the development of brain centers through a correlation of hand and mind activities. It is in line with true racial development, and deserves place in the school along with the book work of the old order.

QUESTIONS FOR DISCUSSION

1. The leading difficulties in the way of introducing arts and crafts and agriculture in rural schools are these: (*a*) Time in the schedule; (*b*) room and equipment; (*c*) preparation of teachers. Discuss the removal of these difficulties.
2. Mothers may feel a superiority and may ridicule the idea of the young teacher teaching these things. How enlist the sympathies of the home folks?
3. This other prejudice must often be overcome: "Girls will naturally learn home practices at home." How meet this? Wherein is this prejudice akin to the notions that boys get sufficient exercise in farm occupations and that they naturally learn farming at home, hence school training here is useless?
4. How are school fairs helping us over these difficulties? How have the clubs aided?

BOOKS FOR TEACHERS

Alderman, L. R. *School Credit for Home Work.* (Houghton Mifflin Company.)
Carpenter, L. D. *Foods and their Uses.* (Charles Scribner's Sons.)
Dobbs, Ella V. *Primary Handwork.* (The Macmillan Company.)
Hapgood, Olive C. *School Needle Work.* (Ginn & Co.)
Newell, C. E. *Constructive Work for Schools without Special Equipment.* (Milton Bradley Company.)
Patton, Frances. *Home and School Sewing.* (Newson & Co.)
Pickard, A. E. *Rural Education.* (Webb Publishing Company.)
Richards, E. H. *Handbook of Domestic Science and Household Arts for Elementary Schools.* (The Macmillan Company.)
Sargent, W. *Fine and Industrial Arts in Elementary Schools.* (Ginn & Co.)
The Delineator, for patterns. (Butterick Publishing Company.)

APPENDIX

APPENDIX

A LIST OF TWENTY GOOD BOOKS FOR RURAL-SCHOOL TEACHERS

The author is often asked what are good books for a rural-school teacher to buy, and he herewith submits a short list of what might be considered as fundamental tools for a rural-school teacher. In compiling this list no attempt has been made to go into the field of special methods, but only to provide a list of a few of the most helpful general books. While some books on the list might be omitted and other books substituted by others, it is still felt that the list is one which rural-school teachers would do well to follow in their buying.

1. Alderman, L. R. *School Credit for Home Work.* 181 pp. $1.00. (Houghton Mifflin Company, Boston, 1915.)

   Describes work done in Oregon, and how to handle such credits.

2. Bagley, W. C. *Classroom Management.* 322 pp. $1.25. (The Macmillan Company, New York, 1909.)

   A very helpful book on the details of organization and control.

3. Betts, G. H. *The Recitation.* 118 pp. Price 70 cents. (Houghton Mifflin Company, Boston, 1911.)

   A helpful little monograph on the recitation, questioning, and the assignment of lessons.

4. Carney, Mabel. *Country Life and the Country School.* 405 pp. $1.25. (Row, Peterson & Co., Chicago, 1913.)

   A very practical treatise on the rural-school problem.

5. Charters, W. W. *Teaching the Common Branches.* 347 pp. $1.35. (Houghton Mifflin Company, Boston, 1913.)

   A helpful book for inexperienced teachers on the principles involved in the teaching of the common-school subjects.

6. Cubberley, E. P. *Rural Life and Education.* 367 pp. $1.50. (Houghton Mifflin Company, Boston, 1914.)

   A consideration of the rural-school problem as a phase of the much larger rural-life problem. Good historical introduction, with good presentation of the present problem, and how to solve it.

7. Dresslar, F. B. *Rural Schoolhouses and Grounds.* 162 pp. 43 plates. 50 cents. (Government Printing Office, Washington, D.C., 1914. Issued as Bulletin No. 12, 1914, U.S. Bureau of Education.)

A good general treatment of the planning, location, sanitation, and arrangements of rural schoolhouses.

8. Earhart, Lida B. *Teaching Children to Study.* 182 pp. 70 cents. (Houghton Mifflin Company, Boston, 1909.)

A very simple and sensible discussion as to how to teach children to study logically.

9. Field, Jessie. *The Corn Lady.* 107 pp. 50 cents. (A. Flanagan Company, Chicago, 1911.)

A series of letters from a country teacher to her father, describing her work in transforming a rural school. Should be read by every rural teacher. The Appendix contains some very good farm-arithmetic problems.

10. Freeman, F. N. *The Psychology of the Common Branches.* 275 pp. $1.35. (Houghton Mifflin Company, Boston, 1916.)

A very capable discussion of the psychological principles underlying good instruction in each of the common-school branches.

11. Hart, J. K. *Educational Resources of Village and Rural Communities.* 277 pp. $1.00. (The Macmillan Company, New York, 1913.)

A collection of sixteen essays, by different authors, on different phases of the rural-life problem.

12. Kendall, C. N., and Mirick, G. A. *How to Teach the Fundamental Subjects.* 329 pp. $1.25. (Houghton Mifflin Company, Boston, 1915.)

A very good presentation of methods of handling the common-school branches, based on the best methods in use in city school systems.

13. McKeever, W. A. *Farm Boys and Girls.* 326 pp. $1.25. (The Macmillan Company, New York, 1912.)

A good book on rural home life, and the life interests of young people.

14. McMurry, Frank. *How to Study and Teaching How to Study.* 324 pp. $1.25. (Houghton Mifflin Company, Boston, 1909.)

A simple analysis of the principal factors in studying, and how to train children in the art.

15. Perry, A. C., Jr. *Discipline as a School Problem.* 273 pp. $1.35. (Houghton Mifflin Company, Boston, 1915.)

Analyzes discipline as an individual, class, and school problem.

16. Smith, W. R. *Introduction to Educational Sociology.* 412 pp. $1.75. (Houghton Mifflin Company, Boston, 1917.)

A study of the organization of society, as this relates to school work.

17. Terman, L. M. *The Hygiene of the School Child.* 417 pp. $1.65. (Houghton Mifflin Company, Boston, 1914.)

An excellent treatise on the hygiene of physical and mental growth, and one that will be of much help to the teacher.

18. Terman, L. M. *The Teacher's Health.* 137 pp. 70 cents. (Houghton Mifflin Company, Boston, 1913.)

A very helpful and suggestive study of the hygiene of an occupation.

19. Wilson, H. B. and G. M. *The Motivation of School Work.* 265 pp. $1.35. (Houghton Mifflin Company, Boston, 1916.)

The place of motivation in school work, and the motivation of work in the subjects of the elementary school.

20. Wray, Angelina. *Jean Mitchell's School.* $1.00. (Public School Publishing Company, Bloomington, Ill., 1902.)

A charming story of a country teacher's experience, and of a kind which young teachers could read with profit.

INDEX

INDEX

Activities of living, Spencer, 10.
Adolescence, 68.
Æsthetic life, the, 13.
Age, chronological, physiological, 71.
Agriculture, 263, 277; values of, 263; racial evolution parallel, 265; elementary nature study, 267; teachers of, 277; school gardens, 278; clubs, boys' and girls', 279; project method, 282; nature outlines, advanced, 283; month by month topics, 288; good farm lessons, 294.
Alternation of classes, 50.
Apperception, nature of, 82.
Applications for teachers, 83.
Appreciation of rural life, 28; of literature, 52; of pictures, 177, 181; of nature, 264.
Arithmetic, 250; eliminations of waste, 251; fundamentals in instruction, 252; primary method systems, 253; rural arithmetic, 256–57, 262; plan of course, 257.
Art-Literature Readers, 96.
Arts and Crafts, 306.
Ayres Spelling Scale, 190–91.

Back to the country, 10.
Before opening day, 45.
Blackboards, 41.
Bodily life, the, 12.
Broadening view of rural school, 11.

Cary, C. P., 287.
Character, 29.
Changing conditions in the home, 4; in the country, 4; in the rural school, 6.
Child, the, periods of growth, 65; individual differences, 72, 77; original capital of, 74; interests, 78.
Clapp, F. L., 26.
Community organization, 59; characteristics, 62.
Consolidated school, the, 17; progress of, 18; Ohio standard of, 21.
Cook, W. A., cited, 26.
Cubberley, E. P., 8, 17, 19, 318.

Deskwork, 98–100.
Desks, 43.
Dewey, John, 24, 80, 85.
Discipline, importance of, 105; purpose of, 105–06; measures, constructive, 113; preventive, 111; corrective, 122.

Early American Schools, 3.
English Language, the, 163.

Freeman, F. N., 203.
Fundamental studies, selection and arrangement of, 135; first six years, 135; upper grades, 136.

Geography, 231; old and new types, 231; some values of, 233; story approach, 234; nature approach, 235; globe lessons, 238; type studies, 241; map making, 244; imaginary journeys, 246; use of pictures, 246.
Grammar, 181; some values, 181; where to be taught, 182; method suggestion, 184; diagramming, 184.

Hall, G. Stanley, quoted, 68.
Hanifan, L. J., 60.
Heating, 39.
Herbart, J. T., cited, 79.
History, 211; the point of view, 211; fact history *vs.* human history, 212; summary of purpose, 213; early beginnings, 213; historical stories,

214; story treatment, 220; biography, value of, 219; the book phase, 221; topical method, 222; dates, reviews, 224; important results, 226.
Home economics, 306; club and home work, 306; club study topics, 307; cookery, 307; recipes, menus, 308; school lunches, 309; conducting the work, 310; needlecraft, 311.
Hygiene, 296.

Incentives, 117.
Infancy and childhood, 65.
Instincts, definitions of, 75; development of, 76; variations of, 77.
Interests, nature of, 78; Herbart's classification, 79; Dewey's classification, 80; how to develop, 80; relation to drill, 81.

Kendall-Mirick, 147, 156, 202, 230.

Language lessons, 163; qualities to cultivate, 163; first steps, 164; formal lessons, 165; written work, 166; compositions, 168; use of stories, 172; picture lessons, 177; method suggestions, 178.
Latin grammar schools, 3.
Library, the school, 158.
Lighting, 38.

McMurray, Chas., 85, 162, 241.
Manual arts, 312; projects in, 313; how to handle, 314.
Measurements of children, 74.
Missouri score card, 22–24.
Moral training, 16, 119.

Nature study, 263; racial evolution, 265; parallels in nature study, 266; methods in, 267; correlations, 269; material for grades, 270; outline studies, 273; advanced studies, 283.

Ohio standards, 21.
One teacher school, the, 19.
Organization, of the plant, 45; of school work, 48; of recreation, 54; of the community, 57; preliminary, 45–48.

Palmer method, the, 201.
Page, David P., 35.
Payne, W. H., 25.
Penmanship, 199; qualities of, 199; teaching faults, 200; fundamentals in teaching, 203; method suggestions, 203; writing scales, 206–08.
Perkins, Mrs. Lucy F., 230, 248.
Physiology, 296; rural health, 12, 296–99; what to teach, 298; child hygiene, 301; health surveys, 301; sanitary surveys, 304; teachers' records, 302; mental hygiene, 304.
Plan of lessons, 102.
Play, value of, 54; supervision of, 54; grouping pupils for, 55; apparatus and books, 57.
Preliminary organization, 46.
Program, suggestive, 53.
Punishment, 122.

Reading, importance of, 137; beginning methods, 138; supplemental, 140; first lessons, 141; second grade, 149; third grade, 151; upper grades, 152; oral reading, 154; the library, 158.
Recitation, the, 86; in rural schools, 86; varieties of, 87; steps of, 90; aims, 88–95.
Recreation, organizing, 54.
Redirection, rural schools, 6.
Rousseau, J. J., cited, 65.
Rural life problem, 4; enrichment of, 5; needs of, 12–17.
Rural school, changes in, 6; rare opportunity of, 10; broadening view of, 11; type of, 17; standards, 20–24; the teacher, 25; the plant, 36–44; reorganization of, 6–49.

Salaries, 34–35.
Sanitation, 296, 304.
School events, 59.
School habits, 113.
Schoolhouses, 37–42.

School spirit, 115.
School faults, 164.
Seating pupils, 47.
Shawkey, M. P., 60.
Special days, 60.
Spelling, a tool subject, 187; needed reforms, 188; selection of words, 188; Ayres's Scale, 190–91; one hundred demons, 190; method of study, 192; better teaching of, 193; dictionary work, 193; simplified, 196.
Standard schools, 20–24.
Teacher equipment, 26–31.
Teacher-qualities, 27.
Teacher's preparation, 30–34.
Teaching to study, 96–98.
Terman, L. M., 71, 85, 320–21.
Ventilation, 39.
Wade, Alexander, L., 19.
Water supply, 39.
Weight and height averages, 74.
Woodwork, 312.

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